The Builder.

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HE competition designs in the ARCHITECTURAL EXHIBITION comprise but a small portion of the number which were originally sent in competition for the several projected buildings. But they form, perhaps, the most interesting and useful feature in the collection of works in Suffolk-street. We had less reason to draw attention to them than we had to other portions of the Exhibition: for, we had long previously been urging upon our professional readers—so pertinaciously almost as to be offensive to some of them—that there was a store of materials in such works, deserving of far more careful study than appeared to be given generally by architects when the opportunity offered. The justice of the selection in any of the present cases, we do not propose to inquire into; indeed, that object is not the one for which means are afforded to us in the Exhibition. In the collection of drawings for the Lille Cathedral—the subject of one of the competitions referred to—there are only seven designs out of the forty-one that were submitted by English and foreign architects. The design which received the first premium is not exhibited; and of the designs which gained medals, or honourable mention, several are equally wanting,—whilst the foreign architects do not present themselves at all. Also we may observe that some of the exhibitors show only a portion of their drawings, and those selected are not always correspondent as to other sets. As regards the Liverpool Free Library and Museum competition, the case is much the same, with the additional inconvenience of the differences of scale between sketches made in the preliminary competition and drawings at large. The Rotherham Grammar School and the Middlesex Industrial Schools competitions, and one or two others may be said to be barely represented.

For any considerable proportion of the competition drawings of the year, however, as we have also remarked, the space in the galleries would be insufficient. Arrangements will, doubtless, be made for the ultimate display of a larger collection, as well as with reference to facility of comparison. This last is of far more importance, as regards the purposes of study, than for the means of checking the decision of a committee. Such a decision is of course often glaringly unjust; but it is fair to committees to say—and there will be no loss in admitting it—that there are often cases where it is most difficult for any architect to name the design which, on the whole, includes the greatest number of points of merit. Therefore, demanding, as an adjudication of premiums does, both technical knowledge and rare judicial ability, we still believe that it is to such advantage as may be got out of an exhibition, that a competitor should mainly look. That seems to be, indeed, the state of the case as to more than one of the competitions from which drawings are exhibited now in Suffolk-street.—It is curious to note how the several essentials of a good building often are found distributed about the competitors' drawings,—one design providing the requisite accommodation,—another what would at first appear to be the best elevations,—whilst, going to the component parts of architectural effect, frequently we hesitate between condemning what in a partial sense would be so masterly, and sanctioning what is not attained without an associated quality obviously unsuited to the object. The design (172 to 177) for the Liverpool building, with the motto "Con Amore," already described in our pages, we may observe, without entering into the question of general merits, itself has a portico characterised by the special defect of that of the National Gallery, in the absence of a visible base of steps. The provision of these, it is true, was attended with difficulty in consequence of the slope of the ground,—but the main object seems to be attained in a design (213 to 222), by Mr. S. Hewitt, one of the sixteen selected for final decision, where the steps appear above a dwarf wall of rusticated masonry, on which there are lamps—and behind which there are side flights—thus in front of the portico and its proper steps, instead of as in the arrangement at the National Gallery. Mr. Hewitt's design is a bold one. It has the motto "Cupola," which indicates the main part of the scheme. There is a great rotonda, with an inner circle of columns. The latter carry a second circle of columns, — but in this case with arches—and these carry the dome, which has a span of over 70 feet, and with no abutment that we can discover, at the springing at least. Otherwise, such a rotonda with the coffered vault could be made to realize a grand effect; and there are many decorative details in this design internally, which display taste. The dome, as seen externally, is weak in treatment; and windows at the back of a portico, at least if they are at all numerous, we have frequently observed can but suggest that the portico should not be there.—The matter of the slope of the ground has been the grand difficulty with the designers in most cases. Some of the designs have a defect common in such cases, where one end of the building appears as though plunged in the earth; whilst in other designs, by providing a plain *soubassement*, and keeping the main apertures and the chief ornamental character to the stories above, and by some artifice of enclosing wall or balustraded flights of steps at the entrance, the objection is overcome.

Mr. Truefitt's large drawing (178) is one which, both from its clever execution and the character of its design, claims notice. A long chapter might be written of the points of discussion which it would suggest. Thus,—How far can the purpose of a building, be it museum, prison, mausoleum, or whatever else, be made to speak from the face of it? Were we to assent to all that has sometimes been said on this subject, every one of the thousand uses of structures, and in places of worship every sectarian difference, should be so made manifest that there could be no need of an inscription. But these shades of distinction never have been attained, and they are doubtless beyond the capabilities of art. The mind of the designer indeed is far more likely to imprint *its* pervading likeness on all his buildings, whatever their object. At the same time it is too obvious to need showing, that certain characteristics are popularly conceived as belonging to particular buildings; therefore, where the design is for a different object, although that object may not be expressed, anything that would convey the expression of the opposite, should be avoided. *Common sense*, in the person of one of "the public," pauses before this design by Mr. Truefitt, and takes it to be a "prison," or a "mausoleum," or anything rather than a museum, and will pay no regard to the consideration that the lighting of museums, libraries, and picture-galleries, from the top, necessarily entails blank wall-surface. It is upon the happy balance of many different requirements and qualities of effect, that the whole success of architectural art depends, and we do not know that there is any subject for design more difficult than that of decoration of mere wall-surface. Soane, at the Bank of England, got the desired ornamentation and relief, only by offending against utilitarian and structural principles. But in regard to the grouping of masses and parts, and the manner in which the coloured materials are moulded with the architecture without the colour predominating over the form—points just now so little observed—the design we have been noticing lays claim to praise.

In No. 179, by Mr. J. Nicholls, the plan has a rotonda, with semicircular recesses, opening out from it,—but, externally at least, could the design have justified the selection of it as one of the sixteen? Mr. F. T. Gompertz's design (180) for the same building, has considerable merit in the internal arrangements generally, and in the lighting and decoration, and the author deserves credit for the manner in which he has presented his design in plans and sections to a small scale. In the design of Mr. E. W. Tarn, M.A. there is a long colonnade on a podium: a semicircular portico and two salient columns at each end project from it; and the latter are surmounted by turrets,—so that the support of columns appears insufficient. Mr. F. Wallen's design (182) deserves close inspection, at least as regards the main elevation, which has the stories well grouped, the principal feature being an arcade of windows on the upper floor, of Byzantine character, which manner also pertains to the details, in which colour is introduced. The centre is formed by three of the arched openings, grouped under a pediment, but is injured by the interference of the hood of the door with the window over it. There are some good features in the section,—but the dome in the centre of the ground would not show as apparently intended. This is a mistake which is more serious in some other designs, and is one which, as of the utmost importance, and as liable to escape the notice of non-professional judges, we have often referred to, to show the erroneous principle in the constitution of such tribunals.

Mr. T. E. Knightley's two designs (183 and 184) display considerable taste. In the first, the difficulty of the ground is well met, by the arrangement of the *soubassement*, and the steps ascending two ways, with a dwarf wall, on which is a group of sculpture and candelabra. In the basement proper, the rustication is pleasingly varied. The other design (184) is somewhat too close in its intercolumniation, but has great merit. Mr. G. O. Lane's design (189 to 195), also of the sixteen, has a ten-columned portico, and lacks novelty in the exterior,—though its author has shown in the elevation a variation from his design, as though hesitatingly, but which variation is really the best of the alternatives he offers. The plan, however, would be suitable, and highly effective; a central hall, with columns and staircases, forming a main feature. Mr. H. P. Horner's design (196), though a modestly drawn elevation, evinces great taste, and might have been expected to be amongst the sixteen. It takes the arrangement of a low building, arcaded along the front, with square piers, five of the arches opening to a loggia in the centre; and the front terminates with an Italian cornice, with an inscription worked into the frieze. In Mr. Lewis Stide's sketch (200) a Romanesque character is adopted. There is not sufficient unity in the design. An arcaded loggia of two stories, forms the best portion. Mr. John W. Papworth exhibits (223) sketches of plans only. Mr. T. A. Britton's design (224) is one of those which well illustrate the mistake referred to as to the design of a dome in intended combination with a façade, and which could not possibly have the effect shown in elevation. Mr. S. Huggins's design, mentioned in a former number by a reference to certain peculiarities of detail, is not on that account to be regarded as unworthy of its author's well-earned reputation. It presents an

economic distribution of the ground, and capability of extension without alteration of the *design*. The portico, projecting tetrastyle between square angle piers, without pediment, but with a statue on the top, and carefully designed details, has both novelty and merit, which may also be said of other parts of the building. The whole is surmounted by an octagonal dome, which groups with the portico. Mr. G. E. Grayson, in his design (233 to 235), places his library in the centre of a circular reading-room, the former being terminated by a lofty dome, from the tambour of which there projects a square block of building, which appears to be a portion of the staircase. Messrs. J. W. and J. Hay's design (236—237) is not favourably represented by the drawings. It consists mainly of one story of windows, with Florentine arches, and a deep cantilever cornice. Mr. R. Kerr gets over the difficulty of the site by introducing a grass slope, on which the ground line is level. There are two wings, each with four columns *in antis*, and a recessed centre, with hexastyle portico, and a dome. Some colour is introduced.

The principal designs for the Lille Cathedral, now exhibited, were noticed briefly in our last volume, p. 169; and the result of the competition was stated subsequently, pp. 218 and 233. Referring to that and other records in our volume, we cannot but again express regret that even those designs which are in the catalogue, could be displayed in Suffolk-street, in so small a number of drawings compared with what were first sent in at Lille. Our correspondent there, spoke of twenty-four drawings under the motto, "Quam Dilecta Tabernacula," that of Mr. G. E. Street, who gained the second premium; and we cannot make up any such number as now exhibited in London (343 to 351). Under the motto, "In Domino Confido," there were twelve drawings; but three only are exhibited (352 to 354) by Mr. T. E. Thrup, to whom the catalogue awards a "silver medal," erroneously, it would seem, though the drawings have high merit. The design with the motto, "Ad Æthera Tendens," which gained a silver medal,—though it is not so stated in the catalogue,—was shown in no less than thirty-one drawings; but Messrs. G. Evans and R. P. Pullan, have but five in Suffolk-street (355 to 359), besides an "Interior of a Cathedral; a Study in Decoration" (360). And Mr. C. Brodrick's design, with the motto, "Spes," which gained a silver medal, is shown in five of the six drawings (336 to 340). Of the other drawings, Mr. John Robinson's (330 to 332)—the design bearing the motto, "Excelsior,"—may be named as having received "honourable mention,"—though it is not so stated in the catalogue. The only other designs for the same building in the Exhibition, are one by Messrs. F. G. Lee and R. J. Jones (324 to 329), a work having some of its features too obviously suggested by the west end of Peterborough, and the spire of All Saints, Margaret-street, and otherwise inferior in character and detail; and a design by Mr. C. F. Kelly (334 and 335), which also is spoken of as having received "honourable mention;" but we think in this case also, by one of these numerous errors—which surely are without excuse. Looking at what we have, we now feel no surprise that the Exhibition at Lille excited so much interest. The drawings of Messrs. Street, Thrup, Brodrick, and Evans and Pullan, are most honourable to the English school; and as designs, the several works display considerably more of inventive talent than we have been in the habit of seeing of late. And it is deserving of notice, that this skill is shown alike in the architecture of the fabric and in the fittings and furniture. The question arises,—What is there that should bind the exercise of this skill in any British architect, within the range of a certain style or of a single class of buildings, or should as too often is the case, prevent the exercise of anything more than clever imitation or adaptation. If really it is only prejudice that interferes with the development of *art*, no matter what be the style,—let us hope that the architectural skill, here so abundantly manifest as in some state existing, will be able to transport itself to any other field of operation, or embody itself in any other language that may happen to be in common use and familiar to the public. To the architect it should matter little what be the style of the day—that which is of household use: but to art—and to the public, if they are ever to become lovers of art—it matters much, that no sudden violence to popular perception of *art*, should be done by mere change or contradiction of style,—which in such case exerts an influence of its own,—such as, perhaps, it may be thought ought not to be within the capability of mere style, — but which operates, and appears to be distinct from, and to usurp the place of, the *art*.

The best of the designs we have mentioned are well contrived for execution in brick and stone, without elaborate external decoration, but with all the regard for the beauty of outline and grouping which should be found in a cathedral. The apsidal east ends with pinnacles are in the chief cases treated with great ability. We may especially refer to Mr. Brodrick's design in this point; though whether in the west front with its three doorways, its noble tower and spire, and the open screen work which aids in the pyramidal outline, or in the general details (which are very elaborate), this design will repay long examination. Perhaps, however, it may not have been thought calculated for the local materials. Two western towers are adopted in all the other designs,—though Messrs. Evans and Pullan terminate theirs at no great height, by open canopy work,—but they have a lofty tower and spire at the intersection of the cross. The western towers in Mr. Street's design would, we think, be capable of improvement, the spire portion being insufficiently developed. The whole of Mr. Street's drawings are elaborately shaded in pen and ink, and there is no lack of pains and taste in his numerous drawings of fittings.—Mr. Thrup's drawings also deserve praise for design and execution. The western towers terminating in octagons and capped by spires are amongst the best features of the design. The interior is highly effective; though the choir arch is somewhat cramped in appearance of width.

We do not profess to notice all the drawings in the Exhibition, and many which would well deserve examination we may have altogether omitted. Some of the few designs for the Middlesex Industrial School have the plan on the concentrating principle,—Messrs. Reeves and Butcher (299 and 303), placing the kitchen in the centre of a general octagonal distribution of the parts of the plan, and Messrs. Morgan and Phipson (300 to 302) having a large swimming-bath in the centre, with the dining-rooms around it. Had we space, also we might mention many meritorious designs for accessories of buildings, and for objects of ornamental and decorative art, and many drawings of old examples. Mr. T. E. Knightley, in the decorations of the Parish Church, Shoreditch (464), Mr. Ashpitel, Mr. Digby Wyatt, Mr. Prignot, Mr. L. W. Collman, Mr. H. B. Garling, Mr. J. T. Irvine, and Mr. W. P. Griffith, contribute works of merit, and of various kinds.

The practical decorators exhibit as in former years, and manifest considerable taste and knowledge of resources, with, as before, not unfrequently the lack of structural principle. Also we would say, that we are obliged to pass over, as their merits would not deserve, many drawings of buildings,—such as those which are contributed by Mr. I'Anson, Mr. Hesketh, Mr. J. T. Christopher, the Rev. J. L. Petit, and others. The several drawings by Mr. R. N. Shaw, the Academy travelling student, are some of the best that we have ever seen; though in recognising their merit, we regret to see evidence of exclusive attention to one particular school of architecture. We should, perhaps, have mentioned a plan by Mr. Bruce Allen, for building the National Galleries of Art and Science, partly on the Kensington Gore Estate, and partly in Kensington Gardens, with a junction across the road; but to this we may have another opportunity to refer.

We cannot conclude without again pressing upon the attention of the committee, that it is indispensable for the attainment of their objects, that the Exhibition should be located in larger, amply lighted, and more comfortable rooms,—if not also in such as can be had at a better period of the year. We do not profess to have given the attention to the collection, which in the manner of study, it would deserve from architects; but we happen to have felt obliged, even for present purposes, to spend much time in the rooms. We would merely observe that such is the cold and discomfort of the place, that it is now painful to spend an hour there in looking at drawings; and that of many of the drawings placed in corners or on the top line, not a detail can be discerned without the greatest difficulty; and the result is, we are well assured, that visitors go away ignorant of the interest which there really is in the collection, or unwilling to suffer the inconvenience which has to be endured in discovering it. The only opportunities just now of properly seeing the drawings, are the lecture evenings; and even then, the lighting in the small rooms is not sufficient. We know we may be held excused for laying so much stress upon these matters; for they have their influence in rendering less speedy the general popular recognition of the real character and value of our art.

ATHENS.*

Let us now carry to an end our account of this world-famed city.

The Return of the Heracleidæ, in the eleventh century, B.C. and conquest of Peloponnesus by the Dorians, forms an event in Grecian history, to which the ultimate eminence of the whole race may be clearly ascribed; an event that formed the conclusion of the mythical age, and the introduction to the period of authentic history, which commences with the first Olympiad, nearly three centuries after that most important revolution.

One of the great characteristics of mythical history is, that the events that it records are wrapped in an uncertainty as to date and circumstance, to attempt to penetrate which would be to destroy the beautiful but tottering fabric upon which it rests; and by exposing the frail nature of the materials of which it is composed, destroy the faith that for ages has leant on it for support. To maintain, then, a belief in events having no parallel in existing times, it was necessary to affix periods of indefinite distance, in order to preserve unbroken that halo of obscurity which alone could prevent the eye of incredulity from detecting those fallacies in construction that might expose to the world the worthlessness of the whole. To pry too closely into the early ages of Grecian history—to rob the realms of mythicism of the bright and glowing imagery that constitutes its sole beauty and value—to analyse too minutely those national mythi, that entwine their beautiful and flowery fictions round each legendary page of a history, handed down from generation to generation, through the medium of memory alone, and communicated in the figurative language of poetry only, would be to strip the tree of knowledge of its verdure, and reduce it to a sapless, lifeless trunk.

"Historia quoquo modo scripta delectat."

The aphorism, doubtless, applies to *authentic* history only; but where authenticity is unavailable for want of a written medium of conveyance, we must be careful, lest in despising too much the shadow we lose the substance also.

"As one who has been journeying through the dark," says Bulwer, by a fine figure, "begins at length to perceive the night breaking away in mist and shadow, so that the forms of things, yet uncertain and undefined, assume an exaggerated and gigantic outline, half lost amidst the clouds, so now, through the obscurity of fable, we descry the dim and mighty outline of the Heroic Age." Alike removed from the darkness of early fable and the broad daylight of written narrative—the period of demi-gods and heroes, superhuman prowess, daring adventure and lofty crime—like the superhuman beings whose deeds invest it with the romance that makes its charm, it forms the connecting link between mythology and mankind. According to mythical chronology, it constitutes a period of about two centuries from the first appearance of the Hellenes in Thessaly to the conclusion of the Trojan War, and amongst the chief incidents that adorn it are the story of Danaus and his descendants, the labours of

* See pp. 2, 34, 60, ante.

Hercules, the exploits of Theseus, the institution of the Laws of Minos, the expedition of Jason and the Argonauts in search of the Golden Fleece, the story of Œdipus and Jocasta, and the "Seven against Thebes," and the Siege of Troy,—the last and crowning achievement of all. The hero, however, whose history was inseparably connected with that of Athens, was Theseus. In his history, by Plutarch, we seem to recognise the type of the romances of our own days of chivalry; but laying aside the events in it that are purely fabulous, his uniting in one body the twelve independent states of Attica, and making Athens their capital;—his institution of the Panathenaia and Synoikia in honour of Athena; his division of the citizens into the three classes of *Eupatridæ*, or nobles, *Geomori*, or husbandmen, and *Demiurgi*, or artisans;—his extension of the Attic territory to the confines of Peloponnesus, and establishment of the Isthmian games in honour of Poseidon or Neptune, and his increase of the capital to the south of the citadel, are deeds worthy of record.

The Theseium (*θησειον*), or temple built in his honour, is the best preserved of all the monuments of ancient Athens. It was commenced B.C. 469, as a receptacle for the bones of Theseus, brought from Scyros by Cimon, and is consequently about thirty years older than the Parthenon. It is a Doric hexastyle peripteral, having thirteen columns in the flanks; the cella is undivided, the pronaos and posticum are distyle *in antis;* the columns of the former alone are wanted of the total number forty-eight. It stands upon a stylobate of two steps, the total length of the upper one being 104 feet; the breadth, 45 feet. It was only the metopes of the east portico of this temple, with four additional ones on each return, that were sculptured, all the rest being plain. The friezes of the pronaos and posticum, continued right across the ambulatories, were also sculptured; the sculptures of the pediments have entirely disappeared. The subjects of these sculptures were the exploits of Theseus and Hercules, and, though much mutilated, evince a high style of art. The development of Greek sculpture is divided into two periods. Not taking account of the fathers of the art, as Dædalus of Athens, too deeply allied to the fabulous by his connection with the waxen wings of Icarus; or his pupil Endæus; or later, Dipænus and Scyllis, of Crete; or later still, Buphalus and Anthermus; the first period of Greek sculpture, in its ultimate development, is that of Phidias, the Æschylus of the plastic art, and his cotemporaries Myron and Polycletus. His chief works were the statue of Nemesis, after the battle of Marathon; that of Minerva, in the Parthenon; and that of Olympian Jove, at Elis; the latter 60 feet high, and so calculated to awe the spectator by its impressive majesty, that the Roman historian says,—"Ejus pulchritudo adjecisse aliquid etiam receptæ religioni videtur, adeo majestas operis deum æquavit." The fame of Ageladas rests chiefly upon his having instructed the above masters in their art. Many others, as Alcamenes, who executed portions of the sculpture at Elis, and probably aided Phidias in that of the Parthenon, held high position in this period. Prior to Phidias flourished Onatus, Hegius, Canachus, Calamis, and others, included in the same school.

In the second period of Attic sculpture, which succeeded to the Peloponnesian war, the sufferings and privations attending that trying period induced a proportionate change in public feeling; and the calm majesty of Jove, Hera, and Athena, gave place to the more violent passions of Dionysus, Aphrodite, and Eros. At the head of the school stand Scopas, of Paros, and Praxiteles. The former was one of the artists employed by Artemisia, queen of Caria, to decorate the tomb of her husband, Mausolus, at Halicarnassus; the latter was a citizen of Athens, and claimed as his masterpiece the Cnidian Aphrodite; but the works of each were numerous, and of a high order. Later still was the school called Sicyonic, of which Euphranor and Lysippus may be considered the type. Numerous works of the above sculptors formed the choicest ornaments of Rome in the time of Pliny. But to return to architecture. A space of three centuries elapsed after the Dorian conquest to the time of Lycurgus and date of the first Olympiad, during which history presents isolated facts, with but little connection with each other. It was at Corinth, during the period of the Despots, that art reappears upon the scene, but changed and transformed in its features. "It is no longer," says Fergusson, "the elegant and ornate forms of Mycenæ and the cognate Asiatic art, but the rude, bold proportions of Egyptian art, and with almost more than Egyptian massiveness." It is the Doric order of architecture, which, drawing its origin from the rock-cut tomb of Beni-Hassan, followed the bold race that first adopted its massive proportions, and left the imperishable records of their presence wherever that enterprising people had pushed their extended rule. The temple at Corinth, of which only a few columns, with their architrave, exist, is supposed to be one of the oldest temples of the kind, and may probably date from 650 B.C. The pillars are less than four diameters in height, and the architrave is proportionally massive.

Next in age to this is the Temple of Egina, dedicated to Jupiter Panhellenius, to which, from the character of its sculpture now at Munich, we may assign the middle of the sixth century before Christ for its date.

It is probable that in the progress of the Persian war most of the temples of Greece, which, like the earliest Parthenon (some of whose remains we have already described as existing in the walls of the Acropolis) must have existed prior to that invasion, were swept away; and that even those that remained were either pulled down or rebuilt to suit the augmented greatness of the state. It is for this reason that all the great temples now found in Greece were built subsequently to the victories of Salamis and Platæa. Then was raised the Theseium, succeeded by the Parthenon (the only octastyle Doric temple in Greece), where the style attained its culminating point. To it succeeded the great hexastyle temple of Jupiter at Olympia, that of Minerva at Sunium, the larger temple at Rhamnus, the Propylæa at Athens, the Temple of Ceres at Eleusis, and the Temple of Apollo at Bassæ.

Closely connected with the Dorian invasion was the colonisation of the western coasts of Asia Minor, from the Propontis on the north to Lycia on the south. The cities thus founded by them were divided amongst the three great races of the Æolians, Ionians, and Dorians, who at the same time colonised the neighbouring islands. The later Greek colonies were those planted in Italy, Sicily, Gaul, and Spain; Africa, Epirus, Macedonia, and Thrace. The race that maintained the dominant superiority in Asia was the Ionian; and of its numerous cities Miletus, and afterwards Ephesus, were the most powerful.

The origin of the above colonies is legendary, and it is not until after the first Olympiad that the history of Greek colonization becomes authentic; and first in importance as in period were those established in Sicily and the south of Italy. The earliest Greek settlement in Sicily was founded B.C. 735; and from that period arose a succession of flourishing cities, of which Syracuse and Agrigentum, both Dorian colonies, became the most powerful. The connection of Athens with Sicily, commencing with their espousal of the part of the Ægestans against the Selinuntines, and ending in the total destruction by the Syracusans of two of the most powerful armaments that ever left the shores of Attica, was a blow from which the Athenians never recovered.

Sicily was peculiarly rich in Doric temples. At Agrigentum were three—two small hexastyles and one of colossal size, being 360 feet long by 174 feet broad, the columns being 64 feet in height. It was commenced B.C. 480, and never finished. Selinus possessed six; the largest of which, an octastyle pseudo-dipteral, almost equalled in size that at Agrigentum. Syracuse and Ægesta each contains a fine example.

The Greek colonies in Italy are of a parallel date with those of Sicily. One, indeed, Cumæ, claims a Eubœan origin so far back as 1050 B.C. These colonies eventually lined the whole southern coast, from Cumæ, on the Tyrrhenian, to Tarentum, on the Ionian Sea, and from their number and importance, procured for the land of their adoption the title of Magna Græcia. The war between their two most powerful cities, Sybaris and Croton, and the total destruction of the former city, is one of the chief events in the history of Magna Græcia, which rapidly declined in power after the fifth century B.C. owing to the destruction of Sybaris and spread of the warlike Samnites and Lucanians, who, in course of time, deprived the Greek cities of the whole of their inland territory. Among the other Greek cities of eminence, Locri, Rhegium, and Tarentum held a foremost rank. The group of temples at Pæstum has for ages delighted the beholder. The oldest of them is a beautiful hexastyle, probably of the fifth century B.C. and of a bold and pure style of architecture; the other two are more modern and less pure, one of them having nine columns in the fronts, the central pillar being meant to correspond with an internal range of pillars supporting the ridge of the roof.

The instances of the Ionic order that we have left to us are scant. The oldest example, probably, was the temple on the Ilissus, found by Stuart in the last stage of ruin, and since entirely swept away. Fortunately its proportions are preserved to serve as the type of Ionic beauty for all ages. This beautiful temple was but 42 feet long by 20 feet broad. In arrangement it was amphiprostyle, tetrastyle;—the shaft of the column 1 foot 9 inches in diameter above the base. Leake supposes it to have been the temple of the statue of Triptolemus; Forchhammer, that of Eucleia. If the latter conjecture be correct, we have in this temple a building erected immediately after the battle af Marathon. Next in date was the little temple of Nike Apteros, which we have before mentioned as recently restored; and last and largest was the Erectheium, deriving its existence from the great epoch of Athenian art. The temple at Tegea, in Arcadia, built about a century afterwards, according to the description of Pausanias, must have been one of the largest of the style.

It was in Asia Minor, or rather in Ionia whence it derived its name, that the greatest number of temples of this style were to be found, but what buildings of the kind existed before the Persian invasion, were probably swept away by that disastrous event. The most ancient example of it is that of the temple of Juno, at Samos, which, according to Herodotus, was one of the most stupendous edifices on record, and an account of whose ruins is to be found in the "Ionian Antiquities." The temple of Bacchus, at Teos, which Vitruvius describes as having been originally intended for Doric, but afterwards changed to Ionic, was probably raised after the Persian invasion. Of the temple of Diana, at Ephesus, 425 feet long by 220 feet wide, even the site is matter of dispute. The temples of Apollo Didymæus, near Miletus, built about 376 B.C. and of Minerva Polias, near Priene, dedicated by Alexander of Macedon, may complete the list of the chief temples of this order in the colonies.

Of the Greek Corinthian order, the works extant in Greece are still more meagre than those of the Ionic, being comprised, at Athens, in the little Choragic monument of Lysicrates, and, perhaps, by a still further straining of the point, that of the Horologium of Andronicus Cyrrhestes; the magnificent temple of Jupiter Olympius being, in fact, a Roman building. The connection of the term "Corinthian" with this order, seems to rest upon no better foundation than the well-known story of the basket of the Corinthian virgin, converted by the taste of the sculptor, Callimachus, into the beautiful capital that graces the style; but modern knowledge is able to offer a far more natural solution of the difficulty in its unmistakable derivation from the Egyptian capital, in its multiplied variety. Asia originated and Greece improved; for it was the province of the latter gifted people to mould everything they touched into beauty and grace; and in the combination of the Asiatic element with the refinement of the European, we obtain that perfection of symmetry that is not likely to be surpassed.

Sixteen gigantic columns of white marble, standing to the south-east of the Acropolis, mark the site of the temple of Zeus Olympius, at Athens. Between the commencement by Peisistratus, and the termination by Hadrian, a

period of nearly 700 years elapsed. From the terms of admiration used by Dicæarchus, Aristotle, and Livy, we may presume that a considerable progress must have been made by the Peisistratidæ, before the work was abandoned, and as the Doric order was that in use at the period, the whole of the marble must have been reworked to mould it in the Corinthian form chosen by the architect, Cossutius, upon the resumption of the undertaking. Upon the death of Antiochus, B.C. 164, the work was interrupted, and eighty years afterwards some of its columns were transported to Rome, by Sulla, for the use of the Capitoline temple. Augustus resumed the building, but it was reserved for Hadrian to complete it, dedicate it, and erect the statue of the God within the cella. This temple was 354 feet in length by 171 feet in breadth; its columns, 120 in number, 6½ feet in diameter and above 60 feet high, and was, doubtless, the most magnificent Corinthian temple of the ancient world. It was decastyle dipteral, having a triple range at either end, and three columns *in antis* at each end of the cella, and its huge masses of masonry must have furnished building materials for the Athenians for centuries afterwards.

From fragments found amongst the Ionian remains of Asia Minor, it is probable that the Corinthian order was used there prior to its introduction into Greece Proper.

In the Ionic temple of Athena Alea, at Tegea, in Arcadia, built by the architect and sculptor Scopas, the hypæthral cella was surrounded by two ranks of Doric columns, surmounted by others of the Corinthian order.

Before quitting the subject of the columnar architecture of Greece, we may just allude to that beautiful substitution of the human figure for the column known as Cariatides, which attains its perfection in the southern portico or enclosure of the Erectheium. The well-known tale of the treachery of Caria in aiding the Persians after the battle of Thermopylæ, and the consequent employment of the figures of Carian women by Praxiteles and other Athenian sculptors in columnar decoration, may have had its foundation in fact; but even there again Egypt had rudely foreshadowed the same idea in some of its internal columniation. Another and a beautiful variety of the same decoration were the Canephoræ (*κανηφόροι*), or basket-bearers, which in after times became so universally adopted. These had their origin in the Athenian practice of employing virgins to carry to the altar (generally upon their heads), the *κάνεον*, or canistrum, being the basket containing the cake, chaplet of flowers, knife, and frankincense, when a sacrifice was to be made. In the Panathenaea, the Dionysia, and other public festivals, two virgins of the first Athenian families were appointed for the purpose,—

> "Illa forte die castæ de more puellæ,
> Vertice supposito festas in Palladis arces,
> Pura coronatis portabant sacra canistris."

With the examples we have enumerated, we may conclude our remarks upon the Greek orders. Of the Choragic monument of Thrasyllus, whose well-known form has been applied to modern fronts, *usque ad nauseam*, we need say nothing.

The Panathenaic Stadium (*τὸ στάδιον τὸ παναθηναϊκον*) was situate on the south side of the Ilissus, and, as Leake observes, is at once recognised by its existing remains, consisting of two parallel heights, partly natural, partly composed of rough substruction, connected at the further end by a third height more indebted to art for its composition, and which formed the semi-circular extremity essential to a stadium." It is usually ascribed to Lycurgus, but it is probable he only completed it by constructing a podium, and levelling the bed of the arena. The spectators sat, however, upon the bare turf for five centuries afterwards, till the seats were covered, by Herodes Atticus, with Pentelic marble, as eulogised by Pausanias. These seats have disappeared, and a grass-grown hollow now marks the spot. Leake conjectures it could accommodate 40,000 persons, and as many more on the slopes above. The Stadium was originally intended for the foot-race, but other contests were carried on in it as well. Horse-races were confined to the Hippodrome (*ἱππόδρομος*), a building of similar form, only longer. In form the Stadium was an oblong area, terminated at one end by a straight line, at the other, by a semicircle; and often formed part of the buildings of the gymnasium; but sometimes stood by itself, as at Athens. Difference in size in these buildings applied only to the relative amount of accommodation for the public, the length of the course, 600 Greek feet, being fixed

The establishment by Forchhammer, of the fact of there being only one Agora instead of two, as used to be supposed, has cleared away a difficulty in Athenian topography. After weighing the testimony of numerous Greek authors, the conclusion arrived at is that it stood in the valley between the Acropolis, the Areiopagus, the Pnyx, and the Museium. With regard to the Doric portico described by Stuart as the entrance of the new Agora, a clearer understanding of the matter assigns it to the temple of Athena Archegetis, as shown in the dedication on the architrave, and refers its erection to the late date of Augustus, as indeed its debased proportions sufficiently indicate.

An important feature in the cities of Greece was the stoa, or portico. Its definition may be given as a covered walk, the roof being supported by columns on one or both sides, and it was either attached to a temple or other public building, or built independent of any other edifice. Those attached to temples were either constructed only in front of them, or surrounded the building, and such were intended for the converse and meeting of the worshippers at such particular temple. Independent of these, however, most of the Greek cities had large detached porticos, some of which public places of resort were not only built in a magnificent style, but were adorned with paintings and sculpture of the highest class of art that the period produced. Of this kind were the Pœcile (*στοα ποικίλη*) and *στοὰ βασίλειος*, at Athens, and the *στοὰ περσική*, at Sparta.

The Stoa Poecile was the one that gave the name to the Stoic philosophers. It had three walls covered with paintings: the middle wall had two representing scenes from the mythical age, and one at each end containing paintings from Athenian history. The subjects of these paintings, were the battle of Oenoë, between the Athenians and Lacedemonians; the Athenians, under Theseus, fighting against the Amazons; an assembly of Greek chiefs, after the capture of Troy, deliberating respecting the violation of Cassandra by Ajax: and the battle of Marathon, painted by Polygnotus, Micon, and Pantænus. Painting in Greece was developed later than sculpture. The materials used were water-colours or wax: oil-colour appears to have been unknown. For a long period the art was confined to colouring statues and architecture, of which traces are found in the ruins mentioned. About the time of Peisistratus, Cimon, of Cleonæ, introduced great improvements in the art, and prepared the way for its ultimate development.

In the era of Cimon and Pericles, the art attained its full development. One of the first of this period was Polygnotus of Thasos, whose improvements upon his predecessors formed an epoch in the art, the old stiffness of countenance and rigidity of drapery giving way to beauty and flowing outline. In Athens he assisted in adorning the temple of Theseus and Pœcile Stoa, and at Delphi the Lesche of the Cnidians. Pantænus decorated the wall round the statue of Jupiter, at Elis, with allegorical paintings. Apollodorus, of Athens, was the first who brought light and shade, and *chiar-oscuro*, to any degree of perfection. Pliny said of him, "Neque ante eum tabula ullius ostenditur quæ teneat oculos." Zeuxis was equally famed for his talent and his vanity: the story of his appearance at the Olympic Games in a mantle embroidered with his name in gold is cited in proof of it. Of his numerous works, he considered the painting of Helen the finest, and his perpetual exhibition of his masterpiece for money, procured for it the title of "Helen the Courtesan!" He was a great master of colour, and excelled in the art of illusion as instanced in his trial of skill with his rival Parrhasius, although defeated in the contest. Parrhasius was a native of Ephesus, but exercised his art at Athens, and, according to Pliny, was the first to observe rules of accurate symmetry in portraying the figure. Of a later period were Timanthes, Pamphilus, and Eupompus: the latter so exalted the art in his native Sicyon, that the old term Heladian became divided into the Sicyonic and Attic schools, whilst the Asiatic school was termed the Ionian.

The above were the precursors of Apelles and Protogenes, contemporaries in the art in the time of Alexander, of the first of whom we need only say, that by the general consent of the ancients, he ranked as the first of painters; his name being by the later Latin poets used as a synonyme for the art itself.

Thus have we roughly traced the history and progress in Art, of that portion of the Hellenic root, that most preserved in its descendants the ancient germ of the Pelasgi.

"Not less in Italy than in Greece," says Bulwer, "the parents of an imperishable tongue, and, in part, the progenitors of a glorious race, we may still find the dim track of their existence wherever the classic civilisation flourished—the classic genius breathed. If in the Latin, if in the Grecian tongue, are yet the indelible traces of the language of the Pelasgi, the literature of the ancient, almost of the modern world is their true descendant."

The world is still taught from Athens.

ON THE USE OF ANCIENT ARCHITECTURAL EXAMPLES.*

However freely I may adopt, in my present paper, the remarks and observations of others, my intention is to restrict myself, in their illustration, to the examples with which I am personally acquainted; and therefore I have little to say on Greek architecture. Not having travelled in Greece, I have never seen its best specimens; and although when I saw the Temple of Neptune at Pæstum I thought it the noblest structure I had ever beheld, yet I can well conceive the Parthenon, even in its present state, and despoiled of all its beauties of sculpture, to be still grander. I do not suppose it possible to convey by a drawing, model, or imitation, the effect produced on the mind of the spectator by the severe simplicity of a Greek temple; nor would it be easy to note all the subtle and delicate refinements which contribute to this effect. I remember that at Pæstum I was struck with the massiveness and extreme plainness of the architrave, and the manner in which it was set upon the pillar; also the boldness of the cornice, and the deep shadow it cast over the whole of the frieze, even at a rather early hour of the day. Then the line of shadow over the upper part of the fluted column appeared to me extremely beautiful. The shape of the echinus, or part of the capital immediately below the square abacus, is doubtless a necessary element in the composition. The triforium range of smaller pillars gave me rather a picturesque bit for sketching, but must, I think, be faulty in principle. It involves a construction too slight in appearance for an edifice in other respects of so great solidity and massiveness, as well as openings of an unpleasing shape. It may, however, have been the only way of meeting a difficulty.

We do not want to revive Greek temples, nor, in all probability, could we revive them. If they were necessary to us, the power, no doubt, would sooner or later be developed; but there is much to render their form inappropriate for a church or public building.

To attempt anything like a pure reproduction of the Greek in domestic architecture would, I fear, give rise to a tame and formal style, without much meaning or interest; one no doubt very different, in this respect, from that of the ancients. As far as we are acquainted with the Greek style, we can safely rely on its rules and principles as grounded on a true feeling of beauty in form; but in our present state of knowledge we could not adopt it without sacrificing much that we can ill spare.

I do not know what attempts have been made, or with what success, to combine the genuine Greek orders with the arch. It has sometimes struck me that even the pure Doric column might, by a modification of the enta-

* Continuation of paper read at the Architectural Exhibition, by the Rev. J. L. Petit. See p. 47, *ante*.

blature, be adapted to the semicylindrical vault.

The introduction of the arch, from whatever quarter it may have been borrowed, is what gives its life and energy to Roman architecture. I believe it is not only in a mechanical sense that "the arch never sleeps;" for it certainly infuses spirit into a building that, but for its use, would have been tame and lifeless. A square-headed door or window, in an architectural composition of any importance, mostly requires some ornament: an arched one may be left comparatively plain. The simplest and most natural arrangement of architectural lines will be vertical and horizontal; and in all good architecture these must predominate. But if they exclude every other, it is easy to conceive that the effect will be most formal and monotonous; hence straight oblique lines have their value. A Greek temple requires its pediment as a contrast to its predominant lines; and the curved lines which present themselves in its composition, few and subordinate as they are, and in some cases scarcely noticed, may for this purpose be found to be indispensable.

It is not merely that a curved line is more suggestive of life than a straight line. The contrast is the object. Look at a sky covered with clouds of the most varied and indeterminate forms: the straight line of a sunbeam gives it at once a life and force it might not otherwise display. A range of the boldest mountains is animated by the introduction of a flat valley, or a small expanse of water. It is by such combinations and contrasts that the imagination is kept awake; and many a scene, the elements of which are of the grandest character, fails to interest us from the want of contrast.

The fault which is most justly chargeable on the Roman style, is the incongruity between its constructive and decorative features. The construction is arcuated, and the decoration exhibits the colonnade borrowed from the Greeks: and yet we cannot say that the colonnade altogether misrepresents the construction. The greater part of most buildings intended for use is on a system of vertical pressure and support; and, therefore, a columnar decoration is not quite incongruous, even although the principal openings are arches. The mediæval arcade, so profusely used as a mere ornament, is, in fact, liable to the same charge of incongruity, when it adorns, as it most frequently does, a purely vertical piece of construction; though we never think of condemning its use, because it repeats the usual forms of the openings. Now I take it that the highest order of architectural ornament is that which harmonises with the construction, without repeating or reproducing it. It may suggest construction, but does not constantly obtrude it on the eye. The frieze of a Doric entablature is not filled up with a miniature repetition of the range of columns below, but with a certain kind of ornament perfectly harmonising with them, and suggesting at the same time the real construction. The horizontal strings and cornices of Roman work always deserve attention, whether they be complicated and elaborate, or plain and simple: those which mark the spring of the arch are often extremely bold and effective.

Last year I expressed an opinion that many of our railway-sheds might be found to contain the elements of a very grand style of architecture. I did not know at the time that there existed an ancient building which exhibits the same elements, disposed nearly in the same manner. The basilica at Trèves, which is given by Mr. Fergusson in his Hand-book, has essentially the same features with the sheds to which I then alluded. It is a large brick building; and, both from its size and position, it is one of the most conspicuous objects in the town. I am sorry to say I could not see the interior, as it is under a course of restoration, and entrance to strangers is strictly prohibited till such time as the works are complete, when it will be opened as a church. The interior is, however, given by Mr. Fergusson, and seems to be perfectly plain, and altogether in unison with the exterior: the decoration, as far as I could perceive from the glimpses through the windows, will chiefly consist of painting. All marks of antiquity seem to be as carefully obliterated as possible; and a very meagre cornice gives the building, as seen from a distance, as commonplace a look as can easily be conceived, and makes it anything but an attractive object to the sketcher. Had this part been judiciously designed, the effect would have been extremely grand. The form is very simple; an oblong rectangular parallelogram, with an apse at one end. The sides have a range of lofty round-headed arches of one order, each arch containing two round-headed windows placed one above the other. The same arrangement is continued round the apse. According to Mr. Fergusson, the building is 90 feet in width internally, and double that length; the height of the walls about 100 feet. You will see at once what an excellent model it is for a church, and I suppose we ought not to regret that it is turned into one; still I confess I am enough of an antiquary to wish it had merely been preserved as a model to work from, instead of being actually put into a condition itself for the purpose. However, the main features seem to be still untouched, and we cannot fail to be struck with the simplicity and grandeur of the original design. It was probably finished with some kind of cornice: if this was deep, rich, and bold in its projection, such as we mostly find in Roman work, the effect must have been very fine. Some ideas might have been taken even from the neighbouring monument of Igel, which, among other merits, has some strings and cornices of excellent character.

The great width of this edifice, and its double tier of windows, naturally suggest the use of galleries, which might either be made an important architectural feature, or treated as fittings, and made subordinate to the original design. In either case they ought to add to the beauty of the whole rather than to detract from it; indeed, we can hardly conceive such a building to be perfect without them. If we intend our new churches to accommodate a large congregation, we ought surely to look with favour upon plans and modes of building which would admit the addition of the gallery as a positive improvement, instead of rejecting it as a deformity.

The ancient work that is left of this basilica positively presents no ornament at all,—nothing but mere construction: perhaps some persons would deny it the title of an architectural work at all. Yet it is evident from its composition and proportions that beauty, as well as use, was consulted; and if there is no ornament, the design by no means excludes all ornament. Supposing the present face of brickwork to remain, it is easy to see how it might have been diversified either by string courses, mouldings at the edges of the orders, architraves, discs of coloured marble, or slabs of white marble, or stone sculptured,—and all this, without any admixture of the Greek columnar style. I shall always protest against the confounding of architecture with sculpture. The two arts are totally different, and have an independent existence. If I had ever doubted this, I should have been convinced by another example in the same city, the Porta Nigra, a noble architectural work, but, so far from having any sculpture, it is devoid even of the commonest mouldings, all the capitals and cornices being simply blocked out: you will neither notice nor suspect this till you examine it pretty closely. But at the same time I will always admit that the character of a building may be ennobled, and its interest increased, by fine sculpture; and if we are able, without detriment to the building, to turn the labour and cost that would have been expended on mere mouldings or conventional ornament, to the production of a higher style of work, occupying, indeed, a smaller space in the fabric, yet equally contributing to its adornment, and equally subservient to the effect we wish to obtain; we may be sure we have got a style, or plan, worth some consideration, and the development of which is likely to lead to great excellence. So that the very plainness and absence of architectural ornament (not of architectural beauty), in the edifice we have been noticing, may prove to be one of the great recommendations of the style to which it belongs. I cannot help thinking that Gothic exacts too much in the way of architectural and conventional decoration, to leave room for the free expansion of sculptural art. You may, indeed, sacrifice the former to the latter, but as you do so, you weaken the genuine characteristics of the Gothic, and partially adopt those of the classic.

The Italian Gothic does this, and is an extremely beautiful style. From its refinement it would harmonise better with the present age than the more decided northern Gothic. It is content with a less generally diffused system of ornament, and more favourable to the introduction of works of the highest art. And it presents us with specimens that might be studied to great advantage by the architect who consults usefulness in his designs. Such churches as St. Dominico, in Sienna, and the Eremitani, in Padua, which, like the basilica of Trèves, contain a wide area under a single roof, may be regarded as valuable models. But the style appears to offer us little or nothing that cannot be obtained in the Roman, or some style immediately derived from it, with more unity of design.

We will now take another ancient example of great simplicity (at least in its present state), and consider whether it may not be turned to account as a model,—the hall or chamber of Roman architecture which is entered from the Hotel de Cluny, in Paris: this contains a nearly square area, of about 38 feet by 36 feet, to three sides of which are attached oblong rectangular spaces, the longer side being that of the central area, and the shorter one about 15 feet.* The whole is covered by two cylindrical vaults crossing each other; consequently the roof of the central part is a cross vaulting of nearly equal cells, such as we see in large German Romanesque churches. The interior arrangement, it is clear, affords good abutment to the vault in three directions. I am unable to say whether there are any corresponding abutments attached to the fourth side, which has not the oblong recess which the other ones have, but consists of a wall, in which are three small arched recesses, the central one apsidal, probably not affecting the external outline. But the weight and thickness of the wall, aided by the tenacity of Roman mortar, may be sufficient. The walls, up to the spring of the vaulting, seem about 30 feet high. Here again there is little or no ornament remaining, the construction fully making up for the want of any. The effect of the interior may be somewhat heightened by the roughness of its present condition; still, even if it were thoroughly repaired and brought to a smooth surface, its aspect could not fail of striking the spectator. It actually requires no more ornament than it now has, but still it would give free scope for artistic decoration of the highest order. Now here is at once an excellent design for a church, in which no room would be lost, and every member of the congregation could both see and hear the minister. Galleries might be introduced without causing any disfigurement, and every ritual arrangement observed that could possibly be required. From the way in which this specimen is surrounded and built up against with houses, it is impossible to judge of the exterior: in fact, the room was only part of a large range, such as is exhibited by the baths of Diocletian, and those of Caracalla, in Rome. But if we adopted the model, it could hardly be found very difficult to devise suitable elevations.†

ASTROLOGICAL CLOCK IN STRASBURG CATHEDRAL.

IN connection with the notes of early clocks, given last week, our readers may like to see the shape which is presented by a celebrated clock made in 1573, and set up in Strasburg Cathedral, where many of them have doubtless seen it, in its present form. Lacroix, in his admirable book on the "Arts of the Middle Ages," gives some particulars of it. He calls it the wonder of wonders. Angelo Rocca, he continues, who wrote at the commencement of the seventeenth century, eulogizes it highly. It was placed on the summit of a tower inside the cathedral. A moveable sphere, on which were marked the planets, the constellations, &c. was the principal piece. It accomplished a rotation in

* It forms, in fact, the centre and three limbs of a Greek cross.
† To be continued.

THE MECHANICAL CLOCK IN STRASBURG CATHEDRAL.

365 days. On each side and above the dial of the clock were represented, in the shape of personages and allegorical figures, the principal *fêtes* of the year, and the solemnities of the church. Other dials, distributed symmetrically over the face of the tower, marked the days of the week, the period of the month, the signs of the zodiac, the age of the moon, the rising and setting of the sun. Each hour two angels sounded a trumpet, and when their concert was over, the clock struck the hour, and then a cock clapped his wings with noise, and crowed twice. There were various automata, too, executed with much art.

Rocca says the construction of this wonderful machine was attributed to Nicholas Copernicus, and adds, that when this distinguished mathematician had finished his clock, the city authorities caused his eyes to be put out, in order that he might not make one similar for another place. It is surprising that an exact and judicious writer like Rocca should have propagated such an absurd tradition. In the first place, Copernicus was not the maker of the Strasburg clock: it is known that it was executed by Conrad Dasypodias, in 1573, who himself published a complete description of it, wherein he showed all the difficulties he had surmounted. In reading his book, one cannot but admire the genius of the man, who did not fear to undertake, and had the good fortune to carry out, successfully, so great a work, the glory of Strasburg, as Lacroix calls it, and the ornament of the magnificent cathedral of that city;—in a scientific point of view we suppose he means.

ON THE RUINS OF HEIDELBERG.

THE RENAISSANCE IN GERMANY.*

LAST session I had the honour of reading a paper describing some of the principal Chateaux of the Renaissance period in France,† and I have now to bring under your notice the well-known Chateau of Heidelberg, a work of the same period in Germany. Besides the Belvedere on the Hradschin, at Prague, built in the latter half of the sixteenth century; the portico of the Townhall at Cologne, 1569-1571; and the Townhalls of Augsburg and Nuremberg, both of the beginning of the seventeenth cen-

* The following is a portion of the paper read by Mr. I'Anson, at the Royal Institute of British Architects, on the 12th ultimo, as already mentioned. The more minute descriptions of the ruins would be uninteresting without views.

† See the *Builder*, vol. xiv. page 14.

tury,—I am not aware whether that country contains many palatial monuments of that time and character; but if, as I believe, it is not so rich as France in this respect, this one monument is so fine and so well preserved, as to afford an excellent opportunity of comparing it with buildings of similar character and the same age in that or other countries. As a picturesque ruin Heidelberg is highly appreciated by the many tourists on the Rhine. Its beautiful situation, its perfect condition as a ruin, its rich deep tone of colour, its aspect embowered in thick woods, the towering background of wooded hills, its craggy bold base of rock, the quaint forms of the town of Heidelberg stretched out below, and the rich landscape which extends beyond westward to the valley of the Rhine, traversed by the noble river Neckar, all unite to excite in the mind those sentiments of romance which we experience in looking back to what has been, in contemplating the ruined monuments of our forefathers.

The landscape over which the eye wanders is classic ground, for the distance beyond the Rhine includes the rich flat alluvial plain in which the formerly important towns of Spires and Worms are situated. It is a district immortalised in the Niebelungen Lied, and the Minnesinger called it Wonnegau, or the Land of Delight; another instance of the very different manner in which beauty of scenery was understood in mediæval times. As to the ruin of Heidelberg itself, there can, however, be no question; for certainly I never in any place saw so many artists expressing their appreciation of the romantic interest of a locality, as might be fairly inferred from the numbers who were seeking to record on their tablets the beautiful effects of this noble ruin.

The building is still in its general features very perfect, and although quite a ruin, is in some parts so well preserved that there is enough to indicate its former well-studied magnificence. It is yet so much of a ruin, and so indicates the rude agencies of war or time by which it has been partially destroyed, as to furnish abundant scope to the imagination; and, in its mingled groups of ruined strength and graceful beauty, to afford the most picturesque combination of form, light, and colour.

The carriage approach is by a winding road on the south side of the building. There were formerly outposts, and two fortified outer courts to pass before reaching the gate. The entrance is over a narrow bridge through a gateway, in which the portcullis still remains suspended, into the inner court. But the more interesting approach is by a steep and picturesque path through the hanging wood, and thence through a subterannean part of the building to the north terrace, from which a partial view of the buildings and a first impression of their characteristic architecture are obtained.

The Castle of Heidelberg was built by the ancestors of the present reigning family in Bavaria. The first foundation of a castle at or near the locality dates back earlier than the fourteenth century, and down to 1801 it was still held by the descendants of the family by whom it was built; but at the peace of Lunéville it, together with the Palatinate of the Neckar, was incorporated with the Grand Duchy of Baden. It is recorded that a certain Conrad von Hohenstauffen, brother-in-law of the Emperor Barbarossa, had his domicile near the site of the present castle in 1142: of this, however, all material trace has ceased to exist, it having been entirely destroyed, as its more modern successor has been ruined, by lightning firing a powder magazine, which it contained in 1537. The foundation of the present building is attributed to Rudolph I. Count Palatine, who commenced it in 1319, and whose son continued the works. In 1329, at the treaty of Pavia, the building is first conspicuously mentioned. In 1346 its then owner added a chapel, since destroyed: he also formed the fine platform called the Galerie du Chateau, cut out of the hillside towards the town. Robert Count Palatine, who became emperor of Germany in 1400, enlarged the building; but the addition necessary to accommodate the court of the emperor did not notably increase the castle palace of a count palatine. In 1415 it became the prison of the Pope John XXII. It was further enlarged by Count Louis III. some time before his decease in 1436. Louis V. between 1508 and 1533, made the important addition of the great round tower, and the still more important one of the great terrace, which rises to a very great height on the precipitous side of the mountain. Frederick II. his brother, who succeeded him in 1544, built more than any of his predecessors, and completed the works still left imperfect. The walls which united the square tower with the tower of Frederick the Victorious, were raised and thickened in 1545; and, following his brother's example, but with much more magnificence, both within and without the old palace, he continued the stone facings to the older parts. The round tower which Louis V. had erected near the chapel of Jetta was improved by him, and several upper stories added. In 1554 a large bell was placed in the tower, after which it was called the Tower of the Bell until its ruin took place. It then continued to receive additions from its successive owners until the seventeenth century, after which it was several times devastated during the thirty years' war, 1620—1648, and nearly ruined in the war of Louis XIV. 1689—1697; but it was restored after each of these periods, and fell ultimately into its present state of ruin, not from the effects of war, but from one of those visitations of Providence over which man has no control. On the 23rd of June, 1760, it was struck by lightning, and for the most part destroyed, and since that time it has never been restored. * * *

The west façade, that next the court, is a very remarkable work, and I know of no piece of Palatial architecture which surpasses it, or even equals it in richness of decoration, notwithstanding the ruin to which it has been exposed. So much as remains is still in a very fine state. The masonry is well and solidly executed, and the stone remarkably perfect, the delicately sculptured decorations being even now in a good state of preservation.

The general proportions of this façade are very satisfactory, as well as the grouping of the windows, and the horizontal divisions of the string courses and cornices: it is placed on an elevated basement, and the whole is on a scale sufficiently large to make it a noble and imposing front.

The details of the pilasters, cornices, and dressings to the windows, show a wide departure from classic proportions, and are not happy, but there is an exuberant richness of decoration conceived and executed in the very best manner, which more than redeems these defects, and is worthy to rank with the best work of the same time in Italy. As a very near approximation in Italian work, I may refer to a chimney-piece forming part of the Soulages collection now in this country, of about the same date. I do not, however, claim for it all the grace and delicacy of some of the highest class work of that country, but it is very masterly, not only in the arabesque, but in the supporters and other figure decorations of the armorial bearings, both animal and human, nude and draped. The central doorway, once approached by a fine flight of steps, with caryatides supporting well-proportioned entablatures, and remarkably rich, effective, and skilfully treated armorial bearings above the door, is a very remarkable and artistic work.

The new buildings of Frederick II. were built on the foundations of a much earlier building, and intended at first for the library: they were burnt in the war of 1689, restored by Charles Philip in 1716, and destroyed in 1764; but since then they have been in great part refitted, and are now used partly as a habitation and partly as a museum, containing some relics connected with the castle and its founders. That part of the building which has not been restored is altogether in a state of ruin: the exterior fronts are plain, like all the rest of the building, but there is one fine projecting bay window on the east, which gives much character to this part of the building. The interior façade is, I consider, remarkably elegant: it contains an open arcade, the lower part composed of two very elegant arches, formed of portions of parabolas, with a double story of arcades above, of four arches on each story. The spandrils between the lower arches are decorated with very finely-carved emblazoned shields surrounded with wreaths of foliage. The centre shield is dated 1549, and on the riband which surrounds it are the letters D. C. V. said to be the initials of the sculptor. On the left hand side are the armorial bearings and initials of the Count Palatine Frederick; and on the other the arms and initials of the electress, Dorothea, Princess of Denmark. Above this there formerly existed another arcade, no trace of which remains.

The Tun Room, part of the palace of Frederick V. was commenced by Frederick IV. between the years 1601 and 1608, and finished by his son and successor, Frederick V. from 1610 to 1619, and burnt in the Orleans war in 1689. Of the celebrated Tun it is not necessary here to speak: its wooden framework is handsomely constructed, but its dimensions are, I believe, much surpassed by some of the wooden vats used in the London breweries.

The gallery of the chateau was originally built in 1346, and re-modelled in 1601-1607, when the palace of Frederick IV. was built, but the balustrade and corner turrets are of later date. This terrace, which is the first part of the building reached in ascending from the town by the footway, already mentioned, is in itself a very noble work: the imposing north front of the castle bounds it on one side, and on the other there is a most charming view, extending over the valley of the Neckar, and the town of Heidelberg almost immediately below.

I feel it right to observe that I have availed myself of the description published by Monsieur de Graimberg for all the details I have been enabled to offer, and that the prints on the walls form part of a work published by him. This gentleman, many years ago, seeing how totally the building was neglected, constituted himself the guardian of the place: he has collected a very respectable museum; and his unwearied attention has done much to arrest the further progress of decay.*

In this building there is certainly much to remind us of the style commonly called Elizabethan, which prevailed in this country from the time when Longleat was built, until that in which the works of Inigo Jones, and especially his façade of the banquetting-house at Whitehall, in 1619, opened the way to a new era in architecture. There is not an unfrequent application of the strap ornament and the flat jointed band, which are applied as decorations to the pilasters, particularly in late buildings of the beginning of the seventeenth century. There is also the same somewhat exaggerated entasis of the pilaster, but all the features are much more boldly marked than with us: the strap ornament, for example, is made to project in bold masses at its extremities, so as to produce great variety of light and shade: the flat-jointed bands are not so small or complicated, nor so much like panel-work, as in our specimens at Holland House or Dorton House, 1596.

The entasis of the pilaster assumes a remarkable boldness, and gives great vigour to the Doric order used in the lower story of the north front in the building of Frederick IV. The same feature I have observed in one of the buildings at Strasburg, but nowhere else so effectively carried out. The use of the reversed column or pilaster is comparatively rare in the German work, and only used in very subordinate features. The niche with the peculiar shell form of the head, which is also not uncommon in French buildings of same style, takes the place of the flat arched panel with which chiefly the interior of our Elizabethan is frequently decorated.

The departure from the previous national type in France is less decided in outline and general form than with us—for the French retained the lofty roofs of the late Gothic, and the castle of Heidelberg has its stepped and decorated gables, as all the old houses had from Vienna to Antwerp, while the English adopted a substitute for the Italian balustrade and cornice, for which it must, however, be admitted that the flat roofs and embattled parapets of our later Gothic had prepared the way.

* This enthusiastic artist is mentioned by Bulwer, in his "Pilgrims of the Rhine." Some years ago, rambling with M. Graimberg over the chateau, he described graphically the gradual increase of interest which the ruins had inspired. He lived amongst them for some years during which a visit from a stranger was an event.—ED.

There is throughout these buildings no want of evidence of a very rude departure from the proportions and rules of classical architecture; or it might, perhaps, be more properly said, that classical models were crudely and ill-applied. The façade of Otho Henry, next the Inner Court, although full of beautiful work, is especially full of such defects: the attenuated proportions of the Ionic pilaster—the disproportionate height of the window pediments, and the setting back of the moulded head behind the horizontal cornice below, are all crudities which show but a very imperfect acquaintance with the Italian types of the age, or at least an imperfect power of applying them; but, apart from these defects, the general balance of parts is very happy, and the decoration generally in very good taste.

The ornament, indeed, of this period appears to me the most perfect which has ever been used for architectural purposes; being sufficiently conventional to be used as architectural decoration, and yet sufficiently approaching to natural forms to suggest the vigour and movement of life, the flow even of sap in the veins of the plants, and more developed life in the lizards and birds which fill up the blank spaces in the leafage.

The finest specimens of this kind of decoration are certainly to be found in Italian work, of which there are many beautiful specimens in the Renaissance Court of the Crystal Palace, the most perfect in my judgment, in matter of ornament, being in the two doors in the screen next the central nave: the case of one is copied from a doorway presented to the Doge Andrea Doria by the Senate of Genoa, and supposed to be the work of Pierino del Vaga, who was engaged with Raffaelle on the Loggie of the Vatican, which work he left in 1527.

The decoration which, however, I would more particularly mention, is that of a small ornament inserted next the pilaster of the door from the church of Santa Maria dei Miracoli, at Venice: it is perfect of its kind, and entirely free from the less happy compositions of the same time, in which, as in the decoration in the Vatican, satyrs, cupids, and monsters, supported on impossible bases, balance each other on opposite sides by a stiff central stem. In the frame of one of these doors is a fine frieze from the tomb of the Cardinal d'Amboise, at Rouen, of the date of 1520-26: it is not a work of the same delicacy as the Italian one just referred to, but it displays great beauty and masterly workmanship.

The works I have been referring to at Heidelberg are, as a whole, worthy to be classed with any of the Renaissance school. They have well-marked individuality of character, fine taste in ornamentation, and are unrivalled in the adoption of heraldic decorations. So far as I know, they are superior to any we have in England, fit to stand in equal rank with the best works of France, and not unworthy examples of the style which grew up in that great cradle of the arts in modern times—Italy.

At the close of the paper,

Mr. Digby Wyatt observed, that considering the early period at which German artists went to Italy to study, and carried the Tedesco style into that country, it was remarkable that, after their return home, Germany should have been the last to adopt the features of the Renaissance style in architecture, and then even to a much less extent structurally than any other country in Europe. The principal artists in the Renaissance style in Germany were the family of Fischer, both Peter Fischer and his sons having studied in Italy; and it was through the examples at Nuremberg and in its neighbourhood that the Renaissance style was introduced into Germany. These, however, were only examples of the details of the style. Mr. l'Anson had enumerated all the principal examples in Germany, and not in one of these were the revived antique orders carried out in their integrity. The Townhall of Cologne was in a very vitiated style, the columns throughout resembling a row of very thin gentlemen placed close together. In Heidelberg Castle there was very little attempt at a regular order. It was further somewhat curious that at the very time Peter Fischer was executing his best Renaissance work, some of his contemporaries and imitators continued to work in the Gothic style; and the wood engravings of the period showed the disinclination of the Germans to adopt a pure Renaissance character. The arts of engraving on copper plates and armour, as well as of damascening, were transferred from Florence, Milan, Venice, Ferrara, and other cities of the north of Italy, to Augsburg and Nuremberg. A picturesque style was subsequently adopted which had not inaptly been designated "the Rubens;" for in it wood, stone, brick, and plaster were alike made to assume that rotundity of form allied to a general heaviness of proportion frequently to be observed in the paintings of the great Sir Peter Paul. Under these circumstances it was peculiarly interesting to dwell upon one of the very few monuments of Germany presenting the characteristics of Renaissance art.

Mr. Scoles said he quite concurred in the opinion that the Renaissance style was never acclimatized in Germany, the detail being much inferior in delicacy to that of France. Heidelberg, however, must always be admired for the beauty of its situation, its palatial grandeur, and its picturesque effects.

The chairman, Mr. Scott, said that he had not studied much the interesting question of the different ways in which the revival of classical architecture showed itself in different countries. In Italy, it appeared that the general form and outline of buildings had never departed much from the classical model. At a very early period, buildings assumed an absolutely classical form, but the details remained until long afterwards of a Gothic character. North of the Alps the contrary was the case. There, the details were meant to be classical, whilst the general form was farther removed than ever from the classical type, as if the country was resisting with all its might the adoption of the new style. He differed somewhat from the opinion of Mr. Wyatt, that the Renaissance style had not been common in Germany. In the street architecture of that country, the style prevailed to an enormous extent. A profusion of gables and other forms, of every shape that imagination could devise, and as far from the classical outline as could be conceived, distinguished these German houses. The Town-hall of Bremen was especially remarkable for its immense towering gables, and the intricate forms of the detail. Every imaginable fantasy of ornament was introduced, and there was not a foot of plain surface throughout. At Hamburgh and other towns the same features were found, proving, as he thought, that the style has pervaded the country to a great extent; and that, instead of being poor in Renaissance art, Germany was full of the most gorgeous specimens of it, although the detail was not equal to that of France and Italy.

Mr. Wyatt said, that he ought to have made the distinction between the kind of art produced by the struggle with Gothic architecture for the admission of the Renaissance, and that of the period when the antique was imitated with exactitude. The majority of the buildings referred to by Mr. Scott were based as to their main structure upon ordinary Mediæval practice, and as to their details, which were of a debased cinque-cento character, upon the precedents for the design of ornaments of every description, made popular by the class of prolific engravers known as the "Petits Maîtres," such as the Behams, the Hopffers, Theodor de Bry, Virgil Solis, Altdorfer, Aldegraever, and others. These were the class of men who multiplied patterns of application for the Renaissance forms to every branch of art and industry throughout Europe, during the end of the sixteenth century, and the whole of the seventeenth. He believed, therefore, he was correct in saying that there was exceedingly little pure Renaissance architecture in Germany. The gables and other features referred to by Mr. Scott belonged to what he (Mr. Wyatt) had termed the Rubens' style, the houses themselves being mostly of lath and plaster, and the designs founded upon the school of facile drawing which arose from the engravings already mentioned.

THE APPLICATION OF GOTHIC ARCHITECTURE TO CIVIL AND DOMESTIC PURPOSES.

ARCHITECTURAL EXHIBITION.

On Tuesday evening, the 20th January, the Rev. Thomas Hugo, M.A. F.S.A. delivered a lecture "On the Application of Gothic Architecture to Civil and Domestic Purposes," at the Society's rooms in Suffolk-street.

After some words of apology that a mere amateur should address a professional audience on the peculiar subject of their study, the lecturer proceeded to state the question which he intended to discuss:—

"First, let me explain what I understand by the terms of the subject itself,—indeed, the only meaning which, to such an audience as this, could be at all interesting. I take it to mean, not that Gothic architecture *is* applicable to civil and domestic purposes, but whether, and how far, it is applicable,—and not so much the mode as the question of its applicability. I do not understand it as requiring me to speak of the production of artistic details, or to endeavour to teach any of my audience the way to construct the parts either of a Gothic town-hall or of a Gothic dwelling-house. The practical application of the art is a professional subject not only entirely beyond my powers, but, I presume, unnecessary and out of place amid the present auditory. Rather would I apply myself to that *quæstio vexata*, practically put, and practically decided about, day by day,—a question which an architect asks an employer, and an employer asks his architect,—a question on the issue of which, especially in communities like our own, the most important results are depending,—how far, and in what way, may Gothic architecture be applied to modern requirements? Shall the edifice, whatever it may be, be Gothic or not? Shall we have a Gothic city,—a Gothic street,—a Gothic building? or is there some other style which is preferable, and more worthy of acceptance? The answer to these queries, I repeat, is influencing, day by day, the face of our country. And, as there is a wondrous similitude between the man and the house in which he resides, the influence may, probably, be exhibited in ways of which, at present, we may have but little conception,—ways which shall affect the moral and material nature of generations yet unborn.

If I am not trespassing too much on my auditory's good temper, I would say a few words, in the first place, on Gothic architecture in general. This will go some considerable way in answering the queries as to how, and how far, it is applicable to modern works.

Gothic architecture owed its existence to the deep longing of the human mind for the permanent expression of its choicest feelings. The hardy intellects of simple, true, and brave men, giving free range to their fancy and individual taste, were its parents and inventors. Instead of the stereotyped forms, therefore, to which the earlier architectural schools were devoted, the Gothic builders roamed freely, and built as their minds dictated, untrammelled by any influence save their own lordly will. The natural element came in afterwards, when the architects felt that they could afford to relax a little from their dignity, and to add the luxury of natural embellishments to the stern forms of which they had at first been enamoured. But natural forms, exquisitely as they increased the charm, were engraftments upon the original design. The plain, unadorned wall, the round arch and circular-headed window, the square capital, and other evidences of early work, take no loveliness from the addition of natural forms, but are the language of minds looking even higher than nature, and of men thinking of eternity while they built for time. By-and-by, Nature lent the grace of her forms to the severity of the earlier fancies. Gothic builders pressed into their service the multitudinous shapes which the animal and vegetable worlds afford; and the ponderous and unornamented structures of earlier times were succeeded by edifices in which, although the rendering was conventional, were placed ornaments, suggested by the interlacing branches and the delicate flowers from the fields, and gardens, and woods around. A character was thus given to the works of man more than ever really savoring of the works of God, and structures erected by human ingenuity breathed the same language of adoration as the fowls of the air and the lilies of the field, and united with them in a *Benedicite omnia opera Domini Domino*, 'O, all ye works of the Lord, bless ye the Lord; praise Him and magnify Him for ever.'"

He continued:—

"All this corroborates the truth that Gothic architecture was the petrified expression of the builders' thoughts, seeking rest and finding none, fanciful, almost capricious,—the production of free minds exulting in their freedom. With marvellous adroitness it accommodated itself to all requirements, and constructed matchless objects of every class. It could throw arches of exquisite taste over the portal of a building, or ornament the walls with arcades, or diversify the windows with forms by which the light was admitted through a thousand varying, yet ever beautiful traceries, or rise into the noble roof, with its assemblage of graceful timbers or moulded vault; or, leaving the interior, could mount into the tower and shoot into the spire, ever equal to the need then present, and ever giving evidence of minds cognisant alike of the requirement, and of an ability to satisfy the same. Hence it is, that all the finest Gothic buildings, although so like, are yet so diversified, and present such conspicuous evidences of the action of individual minds. All sprang of hopeful appreciation of a free gift. All were the offspring of love without fear.

The forms, then, of Gothic architecture, are those in which men of old expressed their holiest, deepest, sublimest thoughts. These men were not barbarians, as some of the moderns take delight in hinting. They had absorbing thoughts of God, His power, greatness,

holiness, and truth; and they obliged the very stones to cry out the same. They built religiously, looking through what they saw to what they saw not, like those old painters, as I have said elsewhere, who worked upon their knees, each line hallowed by an aspiration, and every stroke sanctified with a prayer. They possessed and venerated the Faith, and they wrote it in every detail of the buildings which they reared as that Faith's material abodes. They had exquisite taste to appreciate and seize upon beauty, and to shrink from deformity, whether near or remote. And they had, besides all this, that priceless gift, the noble heart to lavish all the results of their varied powers upon the visible abiding-place and worship of that great and glorious Being, who had so richly ennobled them and made them what they were. They gave Him back in love the spirit which they had caught from Him in knowledge."

The lecturer then contended, that the use of Gothic forms should be limited to churches, colleges, hospitals, town-halls, &c. He allowed that the churches of Sir Christopher Wren were entitled to very high praise as exquisite works of art, but considered that they were deficient as churches from the absence of the religious principle in their construction.

Mr. Hugo spoke strongly, however, in favour of the selection of the style of the Renaissance for domestic edifices:—

"With regard to domestic edifices, I am willing to admit that where practicable, a Gothic house is a very charming thing both to look upon and to possess. Nothing lovelier, in many a village of England, than some late Gothic mansion of the Elizabethan or Jacobean age, full of comfort, breathing of hospitality and goodness, and redolent of home. Who of us is there who has not more than once such in our mind's eye? Who of us knows not of some hamlet which looks almost the same as it might have done two centuries and a half ago, basking in the sunlight of a summer's morning, or illuminated through every ruddy window on some tempestuous winter's night? Yet, must I needs say, addressing myself to a London audience, that we have, in my humble opinion again, but few opportunities for the introduction of such edifices into the crowded streets of our enormous town. Nor, as I think, do we need them, beautiful though they are. The taste of our forefathers, or rather, I ought to say, the taste of the all-accomplished architect of London rising from the ashes of the great fire, has given us some glorious houses, which, as dwellings for intelligent men, I can never hope to see surpassed. At this moment I have one in my mind's eye still standing in Mark-lane, the very model of a city house, every detail containing some evidence of the mind of the workman, stamped with the impress of a certain creative energy, which could form nothing trivial or mean; but which, possessed of a noble idea, pursued it into execution, and made it visible to the delighted eyes of others. I have elsewhere shown that I am not blind to the attractions of Crosby Hall, and other edifices of a similar class; but it is impossible to reproduce such structures among us, and the mere longing for them is little better than a weakness. The application of Gothic architecture in this case need take up no part of our time, for the subject itself admits not of discussion. We cannot apply a thing which does not allow of application. And that is the case with us here, and under our present circumstances."

And the lecturer concluded with the enunciation of two technical axioms in cases where the Gothic is selected as the style of modern edifices:

1. Buildings are to be constructed according to fixed and rigid rules. He said:—

"Any kind of application of Gothic architecture to any purpose whatsoever, which is intended to be brought about by the mixture of Gothic and non-Gothic details, is perfectly suicidal in its nature, and entirely subversive of the true principles of art. If you have Gothic edifices at all you must have them of strictly Gothic construction, or you have nothing else but a deformity and a monster. To give, therefore, or to be supposed to give any rules for the production of such things, would be an act for which I should never forgive myself. I repeat—and it cannot be impressed upon men too much—that any attempted application of Gothic forms to meet our present requirements, which shall proceed on the allowance to omit what are essentially Gothic details, deserves not our praise, but our most determined opposition."

2. All their details are to be essentially real. As an example of unreality, he instanced the following:—

"Some months ago I walked into a field near town, where I saw men laying in the foundations of a line of buildings. The walls were just level with the ground, and reminded me of some of those extraordinary little Roman baths sometimes discovered. There were several little square compartments about two and a half feet in breadth, little corners here and there,—in fact, a labyrinth. I had the curiosity to make inquiries about the intention of the work of what seemed the presiding genius of the place, and was answered, with a stare of the most edifying compassion, that the tangled ground-plan before me was, in fact, the foundation of a row of Gothic villas. Gothic! It was a base prostitution both of the term and of the thing! The building was (to use the word which solicits me) a sham! And I think I should not very far err in asserting that the generality of modern Gothic houses are unrealities and shams. Now, if there be an enemy against which I would more vigorously set myself, and desire more vigorously to set you—it is an unreality. Unrealities of all kinds are at this very moment our curse and bane. Shams abound in literature and in art, as well as in things still higher and still more precious. And I verily believe—though some, perhaps, would deride the assertion, and more would wonder at it—that such edifices as those to which I have just alluded exercise an immoral influence on them who have the misfortune to be connected with them. An atmosphere of falsehood is around them, and pretence is their characteristic. They affect to be that which they are not, and affect to be not what they are. They are hypocrites in plaster,—as despicable in their way as hypocrites in flesh and blood."

PUBLIC PLAY-PLACES.

A QUESTION was raised the other day by Alderman Rose, as to what should be done with the street boys, with a suggestion that the site of Smithfield Market should be made a public playground. Some suggestions on this subject, made by Professor Hosking, in the Supplement to his article on Architecture, in the "Encyclopædia Britannica," are worth quoting:—

"In laying out a town," says the writer, "there need be no mere lounging-places provided, such as the paved area of Trafalgar-square, in London, or as the *place* so common in the towns and cities of the Continent. Markets should be provided for in sheltered and inclosed buildings, and not held in a *place*; and a more than equivalent for the *place*, or even the village-green, ought to be provided for out-door recreation, and it may be, rest; but wholly irrespective of business. To this effect plots of from five to ten acres each, making in all not less than one-tenth of the whole area, should be reserved in laying out a town, or in adding to a town; such plots being so disposed as not to be more than a short half-mile apart, or so that there shall be one such plot within less than a quarter of a mile (a sufficiently long walk at once for a child, or for a woman, or a girl, carrying a baby) of every domicile; and every such plot inclosed, but accessible on every side, and laid out in the best manner to make it a pleasant resort at all times for men and women seeking rest or healthful recreation, and as a playground for children. With such a provision in a town, idle men and boys may be reasonably required by the police to "move on;" and, with almost equal advantage to children and to the community at large, the trundling of hoops in the streets may be prohibited; whilst river or sea-side quays for business, or terraces for pleasure, need not be the permitted haunts of thieves and beggars. Out of a ten-acre plot (the size of the whole area of Russell-square, in London, and about that of Lincoln's-inn-fields, up to the inclosures before the houses), one acre disposed in four distinct quarters of an acre may be assigned to the four essential requisites of every hundred-acre area in a town,—a church, a school, a library with reading-rooms, and a building to contain baths and wash-houses,—one at each of the four corners of the town-garden, in its own quarter-acre plot, and each communicating directly with the garden as well as with the streets by which, if houses or other buildings front towards it, the garden should be belted, without taking them out of the ten-acre area. The town-garden need not supersede the square and its garden, which may be formed and the garden maintained in all its exclusiveness with great public benefit, wherever the prospective demands of a future population may seem to require squares in connection with the streets, by which, and by the buildings fronting to them, the greater part of the whole area will certainly be covered. Nor need the town-garden vie with the square-garden in the relative extent of its plantations, or in the picturesque disposition of its paths. It should be laid out with broad walks, and hardily turfed lawns: it should have a fountain, and trees should not be wanting;—upon the whole, more like Hyde-park, the Green-park, and the public grounds of the Regent's-park, than like the too elaborately beautiful ground of St. James's-park. The town-garden should not be too delicate for cricket and quoits; nor should it be supposed to render the suburban park a superfluity;—the town-garden for children in the day, and for work-day evenings for men and women, and the park for holidays."

THE PROVISION OF DWELLINGS FOR THE LONDON POOR.

So great is the size of London, that it is not an easy task even to glance once a year at its various districts; and yet it is important that those who wish anxiously for beneficial progress should make themselves acquainted with the sanitary and educational movements which are going on amongst its vast population.

From time to time we have revisited various localities, and would now look once more to the neighbourhood at the bottom of Gray's-inn-lane, a spot which has been more than once referred to in the *Builder*.

While viewing the miserable rooms in Charlotte's-buildings and some of the courts adjoining, it is impossible not to feel anxiety about those who are here and in other parts of the metropolis so thickly crowded together.

In these neglected spots a new generation is springing up, without care for education, decency, and in some instances we fear honesty; and nothing can be more disheartening than the aspect of the large groups of lads, from seven to eighteen years of age, visible in obscure corners, with sentinels posted to give notice of the approach of the police, busily engaged in gambling, and using language shocking to the ears. They have never had the chance of useful employment; are learned in all mischief, but wanting in such knowledge as would fit them to be useful members of the community; and unfortunately it cannot be doubted that these dangerous weeds are increasing in an undue ratio, not only in London, but in other large towns.

No thinking person can glance without feelings of pity at the several thousands who are thus thrown upon the world without a chance; and many good men are endeavouring to find some remedy for the evil. Various plans have been suggested; and great as may be the disputes on this subject, all will agree as to the impossibility of rearing useful men and women in such dens, and under such conditions as it has been our painful duty to describe. Charlotte's-buildings, Fox-court, and some of the alleys adjoining, have been greatly improved by the efforts of the sanitary police; and yet these are still sad places.

In providing dwellings for the industrious classes in large towns, one of the chief efforts necessary is to get rid of the prejudices which exist, and make it difficult to persuade those who have been accustomed to certain dwellings to change them for others which are evidently better; and in consequence, persons who own the inferior description of house property can point with a sort of triumph to the appreciation, by their tenants, and the profits of their dwellings, in comparison with some of the model buildings which have been put up in London. We cannot, therefore, look without great interest at the working of these institutions, and feel that those who have their management hold a great responsibility; for capitalists are watching the experiment, and money will not be wanting to rear any description of dwellings which will return a fair profit upon the outlay.

From time to time, and in so many various quarters, the £. s. d. consideration has been submitted to us, that we are induced, with the best feelings, to allude to one or two circumstances in connection with the new buildings which are worthy of notice.

In the St. Panoras-road the sets of apartments consist of two and three rooms, and other accommodation: for these a rent is charged of 4s. 6d. 5s. 6d. 6s. 6d. and we believe some are charged as high as 7s. a week (the latter amounting to 18*l.* 4s. per annum), a large sum when we consider that smart and comfortable cottages can in many places be had for a trifle more; and although the internal arrangements of these apartments are excellent, still it is evident that the rent here charged is more than can be afforded by the great body of mechanics,

for whom this place was intended, and the style, approaches, and staircases, are not sufficiently attractive for those who can afford so much. Three or four years ago it was rare in this building to find any apartments to let. As we have before stated, the rents have been from time to time raised; and since the last increase twenty and more sets of rooms have been empty at one time, and some of the more expensive have been empty for upwards of a year.

Before leaving this part of the subject it is necessary to allude to Tyndall's-buildings, in Gray's-inn, referred to in this Journal; and here, unluckily, things have not so far worked well. There are, however, causes that have produced this effect, which, when explained, should not dishearten those who take an interest in this movement. At the time we heard of the purchase of this block of houses, we knew that there was a most difficult population to deal with; in fact, we do not remember seeing together such a dangerous company as has been gathered here on some evenings when we have ventured to look in. They were not the starved and miserably poor, but strong and healthy men and youths, warmly dressed in velveteen coats and showy neck-ties, who get a living, as a police-officer said, "goodness knows how; though you and I can guess, sir." The majority of the dwellers in this place did not care about changing, neither did they like to have much inquiry made; and it must be borne in mind that a large number of persons in London who have an interest in the property let to the poorer classes, and who have much influence with them, are opposed to all changes, as entailing upon them expenses which they must, as a matter of necessity incur, when improvements are made near them.

It unfortunately happened that the Association did not succeed in purchasing the whole of the houses in the court, and this, in various ways, led to much annoyance and difficulty. Notwithstanding, the necessary repairs and alterations were proceeded with,—the cisterns and closets were arranged; the cellars cleaned; ventilation cared for; washing places made in each house; rooms which might be let to families were judiciously fitted with partitions; in fact, the change made in the appearance and wholesomeness of the place was wonderful: and yet a number of the inhabitants seem to have opposed this beneficial arrangement. Although the collector had formerly felt little difficulty in collecting the rents when the place was a scene of dilapidation and ruin, it has become, strange to say, not easy now to collect the rent; and many doors are fastened with a padlock, the tenants having left. This sort of wilful and ignorant contempt for the means of health and comfort, causes mingled feelings of vexation and pity. We must not, however, be disheartened, for although amongst the old the chance of a change for the better is not great, still we have hope that if proper exertions are used we shall be able before long to act to some profitable extent upon the young.

It can only be want of knowledge, or the most dreadful poverty, that will cause men and women with families of little children to prefer rooms poisonous from stagnant drains, dirt, and want of air and water, to those which are healthfully arranged, and not more expensive.

Ill-arranged dwellings, want of proper education, and of honest employment for the children of the poor in our great cities, are the chief causes of crime and shortened life, and it is difficult to know which of the above-named items is the means of producing the greatest amount of evil. Every one will, however, be doing good work who will endeavour to get rid of any of these bad conditions. It is clear that a certain amount of education will create a wish for better dwellings, and the improved homes will lead to an increased desire for advanced education. We were, therefore, glad to notice in the long passage which leads from Gray's-inn-lane to Leather-lane, on the front of a house which in former days had been a residence of some importance, the words "National School." A considerable part of these premises seems to be let out in tenements, and it would be well if the proper authorities were to look at the overflowing dust and the rapid progress which is being made in filling the cellars with offensive refuse. Some other things should be attended to, for when a number of children are gathered together for several hours in the day, it is impossible to take too much care to ensure health.

This school is here in a most useful position. A part of the ordinary dwelling has been, at very moderate cost, converted into a place where 300 or 400 scholars, boys and girls, can be accommodated; and it was pleasant, after leaving the scenes which have been alluded to, to see such a large number of children cleanly dressed, and being trained to be orderly.

The school seems to be well managed, and it affords a contrast to compare the boys and girls and teachers with those playing not far off. It was satisfactory to find that drawing had not been neglected, and specimens were shown of the work of boys who, in an incredibly short time, have acquired a degree of skill which would surprise many who have either neglected this useful branch of education, or been taught on old-fashioned plans.

In this and other National schools in London, the charge is from 2d. to 3d. a week for each pupil, and an extra penny or so a week is charged for drawing. Constituted as these schools are, and intended for the use of the children of our mechanics and persons of small means, whose boys one day are expected to take part in the production of some of our manufactures, it seems to be question for the serious consideration of the managers whether it would not be advisable to abolish the extra charge for drawing,—a branch of education nearly as important as writing and arithmetic. On inquiring the places from which the boys had come, we learnt that from Tyndall's-buildings there were none; from Charlotte's-buildings, none; and from Baldwin's-gardens, eight. Thus showing that the nature of the dwellings has a great deal to do with the inclination for instruction. There are 148 boys on the school-books.

In the Thanksgiving building in Portpool-lane, several of the apartments for single women were empty; and we were surprised to find complaints made by some of the tenants of a very insufficient water-supply, caused by some leakage of the pipes, left unattended to.

If the improved dwellings which have been erected are not remunerative to the builders, or appreciated by those for whom they are intended, it is time to think of some other plan which may supply shelter to a large class which must be cared for.

PROPOSED MEMORIAL OF THE LATE JOHN BRITTON.

I OBSERVE in your paper of the 10th January, an interesting account of *John Britton*, whose death took place on New Year's Day. That account was evidently written by one who was intimately acquainted with him, who knew his worth and talents in all matters of archæology and literature. I observe that there is a proposal made of placing some suitable *memorial* of him in the cathedral of Sarum, but would it not be *peculiarly appropriate* in the church of his *native village*, Kington St. Michael? That church I hope will be restored shortly to somewhat of its former beauty; and might not the many architectural and archæological friends of Mr. Britton take the opportunity of restoring some part of the edifice, most of which is at present in a sadly dilapidated condition, yet exhibiting *specimens* of that architecture, Norman, Early English, and Decorated, which John Britton's works so well illustrate? A "Britton Aisle," or a "Britton Window," after some examples given in his own works on church architecture, would well perpetuate the name of the departed in his own native village, and in a neighbourhood of Wiltshire to which he was naturally so much attached. I should feel much obliged, if, by means of your valuable publication, you would bring this subject before his friends, and especially "*The Britton Club*."

A WILTSHIRE FRIEND.

*** The suggestion has already been made, and if not adopted by the Institute, who seem to desire that the memorial in Salisbury cathedral should be put up wholly by themselves, will be, we have no doubt, by others. The Wiltshire Society have already discussed it, we are told. Mr. Markland suggests that the memorial in the cathedral should take the shape of an altar-screen, much needed there he thinks.

THE "CONSERVATOIRE DES ARTS ET METIERS," PARIS.

IT was the 19th Vendemiaire, in the third year of the Republic (October 10th, 1794), that a decree ordered the creation of the "Conservatoire" of Arts and Sciences, on the suggestion of Gregory, Bishop of Blois, but it was not till four years after (1798), that the council decreed that the buildings of the ancient Abbey of St. Martin-des-Champs, in Paris, should be appropriated for its purposes.

This structure, as it formerly stood, was composed of a principal building, between the court and the garden, with two wings projecting from either side, the one enclosing the garden, the other the fore court, which was shut in from the Rue St. Martin by a wall. Of the two wings on the fore court side, both built by Pierre de Montereau, the architect of the Sainte Chapelle, in the first half of the thirteenth century, the one to the south was consecrated as the chapel; the other, the northern, being used as the refectory.

The interior of the chapel, which is appropriated to the machinery, was a beautiful specimen of Gothic architecture, and we can still admire it amid the works that are now being executed there. The refectory is at this time used as the library. Externally it is a fine Gothic edifice, adorned with rose and pointed-headed windows, but which to the south they have had the bad taste to wall up for the purpose of constructing an amphitheatre: to the north the walls have strong buttresses. The interior, a magnificent nave, 42 mètres by 7 mètres, is divided into two by seven columns, of marvellous lightness and elegance, the shafts being banded midway.

From each angle of the capital spring groinings which, meeting similar ribs springing from each side above the engaged columns, form pointed vaultings. The engaged columns on each side are supported on brackets, placed at the same height as the band on the columns in the centre. Seven paintings, by M. Gerome, decorate the walls, the subjects being Art, Drawing, Painting, Science, Natural Philosophy, Chemistry, and the patron of the Abbey of St. Martin.

At the end of the north side is the reading-desk (as at Chester and elsewhere), the staircase to which is formed in the wall. The building was fitted for its modern use by the architect, Vaudoyer.

THE WOLVERHAMPTON WORKHOUSE COMPETITION.

As a communication respecting the Wolverhampton Workhouse Competition, in your last publication, is so worded as to lead your readers to draw unfair conclusions, we in reply would state;—That on the advertisement for plans appearing, finding the time to be very limited, we at once commenced our drawings, at the same time individually by letter to the Board, protested against the remuneration offered; some few days after, and when by much personal exertion we had matured our plans, we were asked to join other architects in a combined protest, to which we assented, and shared in drawing up the letter which was then presented, and which is that referred to in their remarks to you. But on their requiring us to forego all our labour, and to wait for the guardians' reply, thus allowing the time to ebb, and so shut us out altogether (which we believe was their aim); we said that we should, as our scheme was in a forward state of completion, much prefer sending in, promising, if they would adopt the same course, to adhere with them in maintaining the usual per centage, even to the abandonment of the work, should our plans be selected. But in reply, with great apathy they remarked, they would rather not compete.

On this we finished our plans and sent them in, with a result of success; but we have not as yet met the guardians, to bring the matter of remuneration before them, therefore the "Architects'" remarks are gratuitous and premature.

But we rather discover a reason for their addressing you just at this time being from interested motives; a competition being open for another public building in the town.

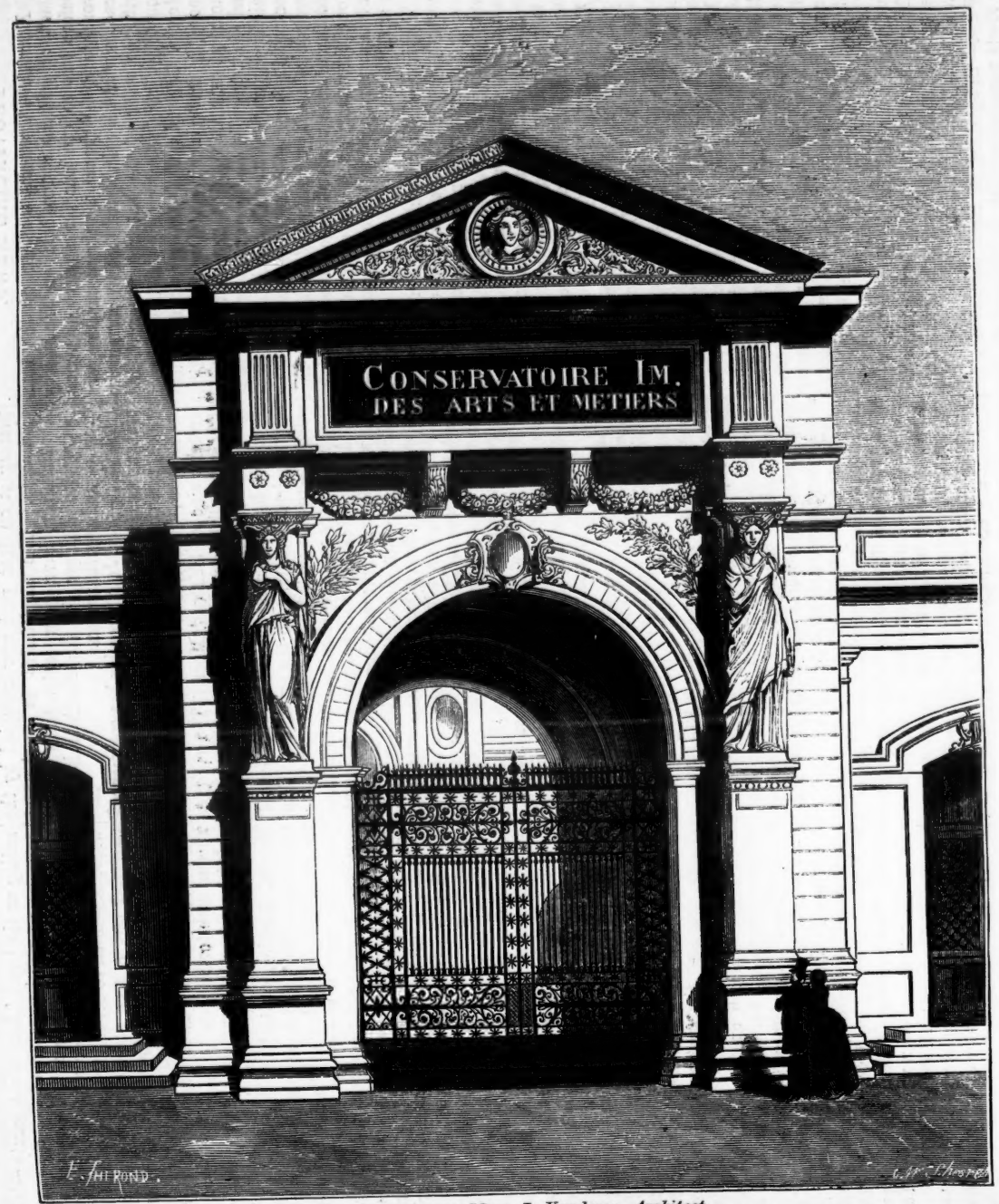
The worth, also, of their remarks you may judge when we acquaint you, that for the public buildings erected during several years past in this town, gratuitous offers of services have generally been made; and for other works, any per centage, even as low as 2½, has been accepted.

That not more plans were sent in, is attributable to the limited time, and the difficulties attendant upon this competition.

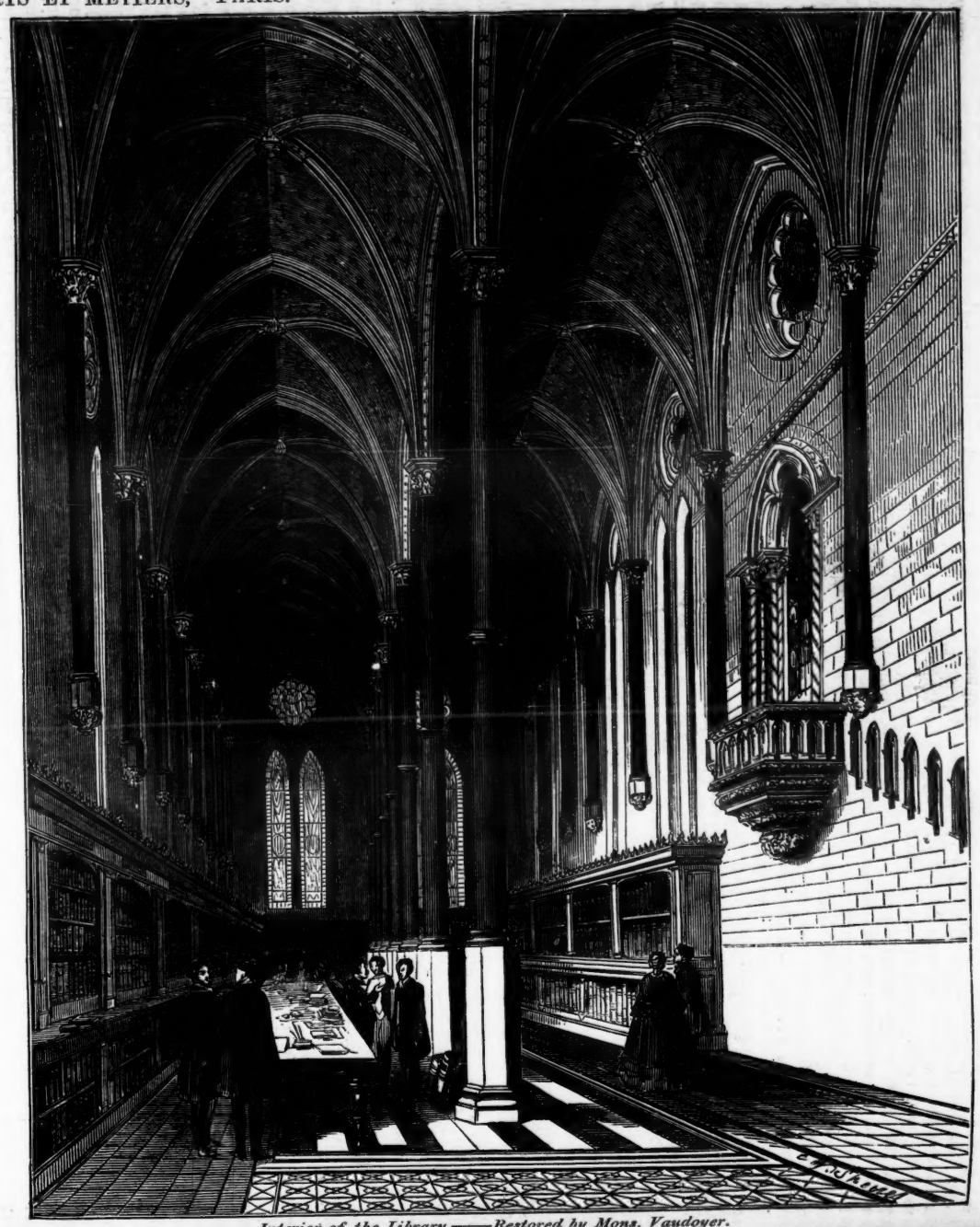
BIDLAKE and LOVATT.

SOMERSET COUNTY SURVEYORSHIP.—Mr. Charles Knowles, of Bridgwater, Mr. J. Leversedge, Mr. C. C. Corfield, of Taunton, Mr. Arthur Whitehead, C.E. of Exeter, and Mr. S. Pollard, of Taunton, are candidates for the office of county surveyor, which will be vacant at Lady-day next by the resignation of Mr. Carver.

THE "CONSERVATOIRE DES ARTS ET METIERS," PARIS.



The Entrance.——Mons. L. Vaudoyer, Architect.



Interior of the Library.——Restored by Mons. Vaudoyer.

PROVINCIAL NEWS.

Norwich.—A special meeting of the local court of guardians was held on Wednesday before last to consider the subject of a new workhouse. A report by the committee was read, in which it was stated that in compliance with the order of the last general court, the committee had further considered the plans of Messrs. Medland and Maberley, sent in by them under the motto of "Humanitas," and to which the court awarded the first premium of 100*l.*; and they considered the arrangement of the building by such plans well suited to the postponement agreed to at the last court, of the erection of the boys' and girls' wards, and the addition of such wards at some future period, if thought necessary; and had such parts of the building as are proposed to be deferred denoted on such plans.

Shoreham.—It is in contemplation to supply Shoreham, by means of waterworks of an inexpensive character, with pure spring water, taken from a spring rising at the foot of a range of chalk hills about half a mile distant. A survey has been made, and plans and estimates drawn. It is proposed to establish a company, and to raise about 1,500*l.* in shares of 10*l.* each.

Llanelly.—The Nevill Memorial Committee offered a premium of 10*l.* for the best design and specification for a building to be erected in the town of Llanelly, in commemoration of the deceased Mr. R. J. Nevill. The particulars were as follows:—*Ground*—Frontage, 80 feet to 100 feet, and not less than 100 feet in depth. *Building*—To consist of one room of an area of 1,250 feet, for the use of benefit societies, &c. room for savings-bank, room for committees, and three rooms for housekeeper, with conveniences for the whole. *Front*—Ornamented, with a tablet for inscription. The subscription list amounted to 1,165*l.* The 31st of January was the period limited for the designs for the building being sent in by the different competitors, and on the 6th of February the committee were to meet to consider them.

Ware.—In speaking of local improvements, the Herts paper states that the flagging of the footpaths which has for some time occupied the attention of the Board of Health, has been determined on, and will commence in March. Mr. Ekins's tender was accepted on the 6th January. The estimated cost for the contemplated works is 1,300*l.* and the sum proposed to be borrowed is 1,500*l.* The expenditure will include the outlay for sewerage where most required, and improvements in Star-lane. The repayment will extend over a period of twenty years.

Sherborne.—The new parochial school buildings in Westbury were opened a fortnight ago, by the bishop of the diocese. The total cost of the buildings will be 2,450*l.* exclusive of the site, which was given by the late Earl Digby, and which is valued at 245*l.* In subscriptions 930*l.* 17*s.* have been raised. The Committee of Council give 1,193*l.* 0*s.* 6*d.*: the National Society, 120*l.*; and Lord Digby allowed for the old school-room in the abbey 100*l.* About 75*l.* more are required to complete the undertaking. The architect is Mr. Henry Hall, of Islington. The buildings comprise three large school-rooms, one each for infants, boys and girls; several class-rooms; and houses at either end for the master and mistress. The school-rooms are calculated to hold each 200 children, with an allowance of 8 square feet per child. The field in front of the buildings will be laid out in gardens, which the boys will cultivate.

Worcester.—Messrs. Hunt and Fletcher, of Birmingham, have contracted for the execution of the sewerage in this city. The total amount of the contract, according to the local *Herald*, is 15,497*l.* which has been accepted. The total of the previous contract (which was repudiated on a technical disagreement) was 14,684*l.*; and it remains with the Local Board to decide whether the first contractors shall be proceeded against for the balance of 813*l.* The new sewerage will be commenced, as soon as possible, on the west bank of the river, *i. e.* the St. John's and St. Clement's sewerage is to be commenced before the rest of the city.

Stockton.—It is in contemplation to widen Stockton bridge by removing the footpath, and placing it on that part now occupied by the abutments. The magistrates in session, at Northallerton, have given instructions to the Surveyor of Bridges for the North Riding, to examine and report thereon.

Halifax.—Mr. John Crossley has commenced preparations for erecting an Independent College, which, when completed, is to vie with the schools at Harrow, Rugby, &c. The site is on the westerly side of Skircoat Moor. The college, it is said, will be a massive building with a large spire and four small towers. When completed, there will be accommodation for 130 pupils and nine resident masters, with the principal. The college is to cost 20,000*l.* The works are to be pushed forward with rapidity, and it is anticipated that the college will be opened in about two years from the present time.

Edinburgh.—Mr. John Steell, the sculptor, has suggested the centre of Melville-crescent, Melville-street, as a site for the monument to the late Viscount Melville. He recommends that the present garden should be changed into a *place*, in which the statue should be the central object. This has not yet, however, been decided upon by the proprietors. The statue, which is a bronze figure, 11 feet 6 inches high, will be ready to put up as soon as the pedestal can be erected.

Peebles.—Lord Elcho has resolved on the rebuilding of the ancient castle of Neidpath, and on fitting it up as a place of residence for his family. Great repairs and additions will require to be made, as a century and a quarter have elapsed since Neidpath formed a residence for its proprietor, and ever since the grass has grown within its courtyard and the ivy round its ruined walls. The works are to be proceeded with during the ensuing spring.

Wick and Lossiemouth.—The directors of the Lossiemouth Harbour Trust have almost unanimously carried a resolution to extend their harbour accommodation by an erection which will involve an outlay of 25,000*l.* The contemplated improvements embrace a breakwater, a steamboat quay, and a basin for fishing-boats. By this extension they contemplate the establishment of steam conveyance with Sutherland, Caithness, &c.

CHURCH-BUILDING NEWS.

Great Saling (*Essex*).—A new parsonage is to be built here, the church entirely restored and remodelled, and new schools erected, from the designs of Mr. R. J. Withers, architect.

Ware (*Herts*).—A small church is to be built at Ware, Herts, for the Rev. F. Layton: Mr. George Truefitt, architect. The following tenders, exclusive of chancel and fittings, have been received:—

W. Hitch	£440	0	0
G. Hitch	425	0	0
Evans, Brothers (accepted)...	392	10	0

Eynsham (*Oxon*).—Considerable repairs have lately been carried out to the church, the service during the time being held in the chancel. The nave and south aisle have had new roofs put to them: the clerestory walls, parapets, and east end walls have been taken down and rebuilt, and the freestone work to the piers and arches on one side of the nave restored. Two of the galleries which were in the church previous to the restorations have been removed, and it is intended to take away the one remaining there, and to make up for the loss of sittings, by enlarging the north aisle. The whole of the interior fittings of the church require to be removed and re-arranged with new work, and there is but little doubt it will soon be done, and the church put in a perfect state of repair. The works were contracted for by Mr. J. Long, of Witney. Mr. W. Wilkinson, of Oxford, was the architect.

Witney (*Oxon*).—A portion of the burial-ground which has lately been provided for the parish was consecrated by the Bishop of Oxford on the 26th ult. The site appropriated for the cemetery contains about three acres of ground, and is situated a short distance out of the town. Two chapels, in the Early English style, and a lodge have been built upon it, and it has been enclosed by a good stone wall fence, about 6 feet high, with the exception of a short distance on each side of the general entrance in front of the lodge, where it is a low wall, having iron palisading on the top. There is a separate gateway entrance provided to each of the consecrated and unconsecrated portions. The contracts for the chapels, lodge, entrances, and boundary walls, amounted to 1,169*l.* which sum has been exceeded but a few pounds. The contracts were taken, and the buildings have been carried out by Mr. James Long and Mr. Bartlett, both of Witney, under the direction of Mr. W. Wilkinson, architect.

Iffley.—Some improvements have just been effected in Iffley church under the direction of Messrs. Buckler, particularly the restoration of the Norman front, which was deformed towards the end of the fifteenth century, by the obliteration of the circular window in the centre. A considerable portion of the circle in the interior was spared, corresponding with the frame of the side windows. The clear diameter of the circle is 4 feet 8 inches: it has been filled with painted glass by Messrs. Hardman and Co. In the centre is the Dove, with two angels on each side, the whole surmounted by a border. This window is a memorial placed by the incumbent to the memory of the late Mr. Eliot Warburton, who was lost in the *Amazon* steam-vessel, in January, 1852. The gallery at the west end has been removed, and the organ is placed on the floor. The oak seats have been reduced in height, and to a simpler form than before. The base of the eastern arch of the tower, previously hidden, has been strengthened and restored. The oak doors at the west end, with the ornamental ironwork, are to be replaced according to the originals which existed till 1843. The various operations have been executed by Messrs. I. and W. Fisher, of Oxford.

Warminster.—The re-opening of the chapel of St. Lawrence, Warminster, took place on Thursday before last. The chapel has been restored, the style of architecture being the Early Decorated. The interior is fitted up with open seats, and the roof is of open work. Several of the windows are filled with stained glass.

Salisbury.—The new cemetery for the parishes of St. Thomas, St. Edmund, and St. Martin, Salisbury, was consecrated by the Bishop of the diocese on Thursday week. Mr. J. Curtis, of Salisbury, contracted for the entire works at 2,737*l.* and they were executed under the personal superintendence of Mr. John Harding, also of this city, from designs prepared by Mr. Henry E. Coe, of London, architect.

Spetchley.—The parish church of Spetchley is likely, it is said, to be restored.

Leek.—A few gentlemen assembled in the Town-hall of Leek last week to consider of the erection of a new church and schools at Compton. The plans of the proposed new church, with parsonage house, schools, and master's residence, were laid before the meeting. The estimated expense of the whole is 5,289*l.* odds. Co-operation was invited.

Walsall.—At a meeting of the Walsall Burial Board, held on Tuesday in week before last, the tender of Mr. Burkett, of Wolverhampton, to erect the chapel, lodge, and entrance of the new cemetery had been accepted; but that gentleman wrote to say that he had since found that he had by mistake omitted 100*l.* from his estimate, and therefore declined to accept the contract. The estimate of the town surveyor was 1,704*l.* odds: Mr. Walter Heap, of Walsall, had tendered for 1,544*l.*; and Messrs. Taylor, of the same place, for 1,705*l.* 5*s.* At a subsequent meeting it was proposed that Mr. Heap's tender be accepted. The Board, however, seemed generally to be of opinion that "if Mr. Burkett, who was so well acquainted with such work, could not perform it for the sum of 1,548*l.* his first tender, it was not likely that Mr. Heap could complete the works for a less amount;" and Messrs. Taylor's tender was accepted!

Tewkesbury.—The new cemetery for Tewkesbury has been consecrated. The ground is on the eastern side of the Cheltenham-road, a short distance from the town, on rising ground, and the chapels are on nearly the highest portion of it. The chapels are side by side, but separated by an archway, 15 feet wide: their dimensions are precisely similar, being 34 feet in length and 17 feet in breadth. The Tewkesbury *Weekly Record* gives an engraved view of them. The entrance is by a porch on the north side of the

Episcopal chapel, and on the south side of that of the Dissenters. Externally, the western elevation presents three gables, the centre one being the archway, which is crowned with an ornamental bell turret with a carved and crocketted spire. The gables of the chapels are pierced with three-light windows filled with decorated tracery of flowing character, and above each window is a small trefoil opening. The roofs are of open timber-work stained and varnished. The seats are open, and also stained and varnished. The floors are laid with red and black tiles disposed in patterns. The entrance-gates have been executed by Mr. J. Rogers, of Tewkesbury. About two-thirds of the cemetery is appropriated to Episcopalians, and the remaining third to the Dissenters. Messrs. Collins and Knight were the contractors. The carving was executed by Mr. H. Frith, of Gloucester. Mr. Thompson was the contractor for the roads and drains. The architects were Messrs. Medland and Maberley, who have been engaged on similar works at Birmingham, Leicester, and Plymouth, and are now employed in carrying out the cemetery for the city of Gloucester. The cemetery stands upon ground rich in the storied memories of the past.

Manchester.—In our notice of the New Barns cemetery chapels (p. 52, *ante*), Messrs. Pritchett and Sons, by a slip of the pen, are called the "contractors," instead of the *architects*.

THE MEMORIAL CHURCH AT CONSTANTINOPLE COMPETITION.

THE committee have selected thirteen designs out of the forty-six submitted, as possessing claims for distinction, and have thus placed them :—

Prizemen.—1st, W. Burges; 2nd, G. E. Street; 3rd, G. S. Bodley.

Proximé Accessit, recommended for extra Prize.—W. Slater.

Especially Mentioned (alphabetically,)—C. Gray, "In te Domine Speravi," R. P. Pullan, G. Truefitt, Weightman, Hadfield, and Goldie.

Honourably Mentioned (alphabetically).—A. Bell, F. Francke (Meiningen), Howell and Budd, Prichard and Seddon.

The report offers several points for comment, but we prefer to see the designs before making any observations beyond this,—that both the first and the third of the selected designs are founded on the church of St. Andrea, at Vercelli!

GOTHIC AND CLASSIC.

IN my letter, published in your impression of the 10th ultimo, it was not intended to convey an *entire condemnation* of Gothic, but rather to protest against its universal application to all purposes for which "architecture" is employed, alike for buildings for religious, secular, domestic, and other purposes; for surely one should be able to tell, at a cursory view, pretty nearly to what use such and such a building is appropriated, whether as a college, mansion, theatre, &c. &c. There should be certain outward and visible signs to guide our judgment in these matters, besides cramping as it does genius into one set form, and ignoring the use of materials, to which not a little of the advancement of the present age is attributable; for Gothic is a style of *stone* and *wood* moulded into various features, the absence of which in certain acknowledged proportions renders it impure and base: it is, moreover, the generally accepted style for our churches, although it is to be wished that it will be modified to suit the requirements of the present day,—but not in a form it has taken in some few instances, viz.—those harlequin-esque structures of red, yellow, black, and blue, with gaunt towers, like keenly-pointed gigantic carpenters' pencils. These appear as if Gothic were very much strained to produce "something new:" beauty of general outline is overlooked in what seems to be an anxious desire to cut up the surface into party-coloured rays, bands, &c. This, I think, is a wrong step. The sight of a church should rather give rise to heavenly thoughts; but this appeals to the senses. The grandeur and exalting dignity are sacrificed, the beautiful simplicity (a great charm) of a Protestant church is nullified, and it is more suitable for the fooperies of image worship than for an enlightened nation adoring the Great One. No. If Gothic is to be modified and perpetuated at all, it must be rather in better adapting it to our mode of worship, making the *form* of our churches more suitable for *seeing* and *hearing*. These important points have yet to be satisfactorily established. These will be found an attainment worthy of cultivation and study; and these, combined with suitable adjuncts, so as not to exhibit a puritanical meagreness, will, when accomplished, form a type for them for some time to come.

Now, the "train of thought" (mentioned by your correspondent, E. W. G.) which produced the nave of Westminster, the north porch of Redcliff, and others, was brought to bear upon the only materials which were available for the required purposes at the date of their erection, coupled with ingenious designing powers, which *altered, improved,* and *progressed*, century by century, and so distinctly that we are enabled to tell the date of particular buildings by mere inspection of certain features and characteristics; but when Mr. Macaulay's New Zealander explores the land, being "well up" in "ancient architecture," from *Brandon* and other sources, he will be sorely puzzled to tell—"how it is that while one building, of (say) the fourteenth century, leaves only a few vestiges *to mark its date;* other specimens, with *exactly similar features and details*, are found—in as tolerable a state of preservation, as the selection of stone in the present century allows them to be." And as he will in all probability search the columns of the *Builder* for information, we will tell him that the twelfth, thirteenth, and fourteenth century architects originated, and the nineteenth century architects drew rather largely from the *repertoire* thus created for them.

With reference to the "obsolete" items, I only judge from what I see erected, whether architects are *anxious* or *not* to revive them; and if we do away with buttress, and pinnacle, and gable, traceried window, and pointed arch, we shall not have much of "Gothic" left. That it was, is, and always will be, "mediæval," there can be *no* doubt; that it can be thoroughly adapted to all our wants in the nineteenth century, there is *very great* doubt; and that it will be superseded by a style that will do honour to our time, and admit of the free use of nineteenth century materials there is little or no doubt. THOS. GOODCHILD.

THE PADDINGTON VESTRY AND THE ROADS.

WITH reference to the letter on the subject of the new roads in Paddington (p. 54), one of the correspondents, whose letters on the subject are now before us says;—

"The new Metropolitan Act, in clause 105, gives vestries not only power to make or complete roads for the public use, but renders it incumbent upon them to do so, on receiving a requisition signed by the majority of the owners in any new street. As the vestry appears to disregard such requisitions on the part of owners whose property is immensely damaged thereby, and will permit the ratepayers of the parish to be subjected to the annoyance of not having their roads cleaned, lighted, watered, or repaired, the aggrieved parties have a remedy in the vestry's liability to a writ of *mandamus*; but as legal expenses of this kind for any single individual to bear would be oppressive, let one and all of the aggrieved parties unite and try the question."

A second, who writes in reply to Mr. Maynard, and signs himself "A Vestry-man of the South-east Ward," says;—

"The facts of the case are pretty fairly stated, so far as they go, by Mr. Maynard; therefore it is unnecessary to repeat them now: he should, however, have stated that no hope of the road being taken by the parish was ever held out, unless it could be arranged that a bar should be kept up. The surveyor of the roads proposed it in the first instance, and the Highway Board recommended it; but the parties interested at the last moment declined the condition, and, as a natural consequence, the vestry simply refused to take to the road because that condition was not complied with, and not because the land beyond would be built upon at some future time. I may further state for the information of your readers, that the road in question leads to nowhere: it is an isolated bit, the roads adjoining not even being parish roads, and it will be no accommodation to the public until the road is made which it is the beginning of, which may be next year or some twenty years hence."

We must content ourselves with having stated the grievance, and leave the sense of the parish to dispose of it.

THE HONDURAS MAHOGANY TRADE.

IN an interesting discourse on British Honduras, its history, trade, and natural resources, delivered at the Society of Arts, on the 14th ult. by Mr. Chief Justice Temple, the history and practice of the mahogany trade was referred to at some length.

The trade of British Honduras, said Mr. Temple, has hitherto been confined to logwood and mahogany. When, and under what circumstances, mahogany was first introduced into Europe it is not easy to say. Some have supposed that it was first discovered in the island of Trinidad by the carpenter of one of Sir Walter Raleigh's vessels. When he came to work it up he was surprised at its hardness and beauty; and drawing attention to it, it was soon very greatly in demand for articles of furniture. This account is scarcely to be believed. There are many articles of furniture now in existence which were manufactured in the days of Elizabeth and the Stuarts, but I do not think one can be found which is made of mahogany. Some say it was not introduced into England until about 1802-3. It is said that a Mr. Gibbons, of London, had a brother who was master of a vessel trading to the West Indies. This worthy skipper, hearing that the doctor was building a new house in King-street, Covent-garden, very fraternally sent him a quantity of wood, which he had brought in his ship as ballast. This wood was so hard that the carpenters could not work it up, and it was thrown aside as useless. But one day Mrs. Gibbons resolved to have a candle-box made, and selected a piece of this rejected wood for the purpose. When made and polished, it was so beautiful, that the doctor determined to have a bureau made of the same material. The bureau, when finished, was shown to the Duchess of Buckingham, who was equally charmed with the wood, and determined to have a jewel-case made of it. By these quick gradations—from the candle-box of a citizen's wife to the jewel-case of a peeress — mahogany became known in England.

It is hardly likely, however, that the captain of a West-India trader, laden with sugar and rum, and also much spice, would take a quantity of wood into his ship for ballast. Besides, we are informed that many years previous to the treaty of 1786, the settlers 'had taken the liberty of cutting mahogany,' without the permission of the King of Spain. There must, then, have been a good market for that article in England long before 1803 or 1804. The time allowed to me will not admit of my giving a particular account of the mode of finding, cutting, and preparing the mahogany. I will merely state that the cutting commences in the month of August. In April and May, in which months the ground has become perfectly hard, from the continued dry weather, the wood is carried upon trucks, drawn by bullocks, to the water's side; and about the middle of June, when the rivers are swollen by the floods, the logs are floated down to about ten miles from the mouths of the different rivers, where they are confined by a heavy boom drawn across the stream. Here the owners select their respective logs, form them into rafts, and so float them down to the sea. The mahogany is always trucked in the middle of the night, the cattle not being able to perform such laborious work during the heat of the day. It is a picturesque and striking scene—this midnight trucking.

An impression has latterly existed that almost all the mahogany in British Honduras has been cut. This, however, is a mistake. There is sufficient wood in the country, both on granted and ungranted lands, to supply the European as well as the American markets for many years to come. A considerable quantity of mahogany has been, within the last few years, cut in the state of Honduras and on the Mosquito shore; but the mahogany works in the former country have been almost entirely abandoned, partly on account of the wood which is accessible being nearly all cut, and partly on account of the extra freight and insurance which are required when vessels are loaded on that coast. From the Mosquito shore very few cargoes have been lately sent; for the wood which grows there, although it is very large, is of an inferior quality. The mahogany tree requires a rich, dry soil. The best mahogany is found to the north of the river Belize. In consequence of the nature of the soil in that district, in which there is a great quantity of limestone, the mahogany is longer in coming to maturity; but, when fully grown, it is of a harder and firmer texture than that which is found in the southern portion of the settlement. There is no wood more durable than mahogany, and none which is so generally useful. It is stated in a little book called "The Mahogany Tree," that furniture is being made in the royal deckyards out of the beautiful mahogany found in breaking up the old line-of-battle ship the *Gibraltar*, which was built in Havana 100 years ago. The English and French Governments purchase yearly a large amount of mahogany for their

dockyards. During the last year the British Government required 12,000 tons, paying 10*l.* 17s. 6d. per ton. The French Government took 3,000 tons at the same price. The Royal yacht is built principally of Honduras mahogany. Private shipbuilders are, however, reluctant to make use of mahogany for their vessels, as Lloyd's Committee exclude all ships of twelve years' standing in which certain parts are made of mahogany. Mahogany vessels of ten years' standing they admit, but even these, I am informed, it is their intention very shortly to exclude. The reason which they assign is, that mahogany differs very much in quality, and it is impossible to know when a ship is built of good or bad wood. But this difference in quality depends entirely upon the district in which it has grown. If they restricted the shipbuilders to the northern wood they might admit vessels of twelve years' standing without any risk. The qualities of mahogany which render it peculiarly fitted for shipbuilding, are its lightness and buoyancy, its freedom from dry-rot, and its non-liability to shrink or warp. The price of mahogany varies according to the size, figure, and quality of the wood. One tree from the northern district, which was cut into three logs, sold for 1,800*l.* or 10s. per superficial foot of one inch. Southern wood, of a small size and inferior quality, has been sold at 3½d. a foot. The present prices in London for small-sized plain mahogany are from 5d. to 6d. per foot; for large-sized plain from 7d. to 10d.; and for large of good quality and figured from 9d. to 1s. 6d.

The yearly average quantity of mahogany exported from Honduras during the last ten years was about 8,000,000 feet, equal to 20,000 tons, or 200,000 tons in the whole ten years, requiring 160,000 trees.

ADAPTABILITY OF STYLE FOR MODERN WORKS.

THE Classic *v.* Mediæval question being again raised, I would offer a few remarks.

I do not believe that the style of a building, whether Classic or Mediæval, in the slightest degree affects its convenience or propriety; and I am equally convinced that Gothic architecture is as applicable to all purposes as Classic.

When I speak of Gothic, I do not at all mean that if we are about building a house, we are, for fireplace and chimney, door and window, buttress and gable, to produce copies of these features of some ancient Gothic building; but I mean, taken as a basis, the Gothic style, chiefly for the reasons that it is the most advanced of any time in the science of architecture,—of construction (though falling short enough of perfection for us to do better); and as a guide, taking the principle of the Gothic architects, and indeed the same, as Mr. Bartholomew proved, that guided the designers of the best architecture of all ages,—that true taste in architecture is purely structural.

For example, if in a window we imitate the glazing of the Gothic architects, with justice we may imitate the system of mullions and tracery; but this construction is infinitely behind our modern appliances, and no less behind our modern requirements. In a dwelling-house, with our system of wood-sash and plate-glass, no mullions in one of its windows need be nearer together than some three to five feet; and it is in direct violation of Gothic principle to crowd such a window with inconvenient and useless mullions, obstructing the light—to admit which is the purpose of the window itself—merely for external beauty, which there are plenty of Classic and even Gothic examples to show is to be obtained without them. Again, lofty pointed arches in a small building, as a modern street house, are surely inappropriate, both from the extra expense of window-frames to suit their form, and the greater proportional width required from the size of the spandrils, to admit an equal amount of light with a square-headed aperture of the same height: but this applies to a semicircular-headed opening also; this greater width seldom increasing the elegance of the window. I should, therefore, prefer a flat-headed window in such a case; a segmental arch, with a rise of 3 inches or so; a splay round the window, or with jambs and head formed of moulded bricks, which are said to be of no more expense than plain ones, the difficulty only being, the few weeks' notice required before they can be supplied. In many cases the high arch might be used as a relieving arch, and the flat one (which might be constructed with a point) used as the support to a thin shell of brickwork, to form the tympanum of the Pointed arch.

And in fact mullions are as suitable to classic architecture as to Gothic. In country towns, houses, upwards of a hundred years of age, which have classic cornices, and windows of ordinary size, divided by a wood mullion (often with a transom as well), have casements, after the fashion of little squares, and that mullions and tracery apply as well to classic erections of more ornate character, the dome at the British Museum will show; but these mullions are reasonably spaced: had the dome been Gothic, there is no reason the mullions should have been more numerous.

If not to others' satisfaction,—to my own, I have proved that there is no reason for a Gothic window to be more inconvenient than a classic one, in any case; and I do not doubt that it may be shown that every other feature in architecture is applicable to our uses, in the Gothic style as in any other.

That I approve of Gothic architecture for its greater science and beauty, is, perchance, matter of opinion and taste. I believe that the Gothic science is greater than the classic, of any times, perhaps excepting several such *quasi* classic examples as St. Paul's.

My opinions are not, however, immutable: they are the less so as the beauties of classic are so eminent, that I can never fail to admire them. "'57."

THE ARRANGEMENT OF A NATIONAL GALLERY.

SOME remarks in a recent *Builder*, on "The Past and Future of Picture Galleries," induce me to mention a few thoughts on this important subject for the consideration of your readers: and first let me submit that a national gallery of pictures, collected by a powerful and wealthy nation, should be worthy of the name, and enable those who visit it to trace the progress of this department of art, and to derive the greatest possible amount of pleasure and instruction from the various works there exhibited.

In our present so-called National Gallery, we have some glorious works, which, however, are so arranged, that to a certain extent they create confusion in the mind of both the student of art and the general visitor. The pictures of Titian, Corregio, Rembrandt, Claude, &c. are foiled one against the other, without any fixed plan. In a private gallery, where we cannot expect to meet with more than one or two examples by the same artist, it is necessary to arrange them so that each may best assist in showing and harmonizing with the beauties of the others. Delicately-coloured pictures should not be marshalled alongside of those of powerful tints and bold execution.

It is well known that Turner, in the Royal Academy Exhibition, could, by the power of his colouring, make pale, for some space around, the pictures of his brother artists. On one occasion it is said that this great painter covered down with water colours a painting which, by its brightness, interfered with that of a young man of merit, which was close by.

In passing along our Gallery in Trafalgar-square, we see in one room a picture by Rembrandt, rich in all its splendid depths,—next it a clear landscape by Claude, then a scene by Nicholas Poussin, and by the side of Rubens and Titian some of the indifferent specimens of Sir Joshua Reynolds, which so inadequately represent this artist, and cause his genius to be improperly appreciated by those who have not seen his best works.*

In each of the large rooms of the National Gallery the arrangement is similar to the above.

It cannot be questioned that in a gallery for the artistic instruction of the people we should have arranged in their order, according to date, examples of art from the earliest times, showing its growth and progress. To effect the required purpose numerous examples of ancient works, if well selected, would not be required.

In a new National Gallery, care should be taken to provide sufficient space for the great mass of materials which must, as a necessity, be brought together, and continually increased. This and good lighting having been managed, it will then be a matter for consideration how best to arrange the pictures. Of course, we should place them according to their dates; and it seems to be desirable that while hanging the works of the various schools,—for instance, Italian, Spanish, Flemish, &c.,—the works of each artist, if in sufficient numbers, should be placed together; and it would give much additional value to such a collection if with these groups there could be placed an authentic portrait of the painter (if possible by himself). There ought also to be plainly written up the time of his birth and that of his death; and on every picture it would be well to put, if it can be fixed, the date of its production. The visitor would thus be enabled to observe the progress of the skill of hand and power of thought of each painter, and also see the image of the man who, on the bare surface, and with pigments useless in uneducated hands, has created works which delight the prince and the peasant.

If such an arrangement could be made as would enable us to see at once the pictures in the present National Gallery in the manner above mentioned, it would be more interesting to even those unacquainted with art.

There might be also one room in which the best specimens of the various great artists might be hung: these should be selected from the collection with the greatest care and intelligence—not depending on one opinion, but be chosen by the voice of such a committee of artists and persons of taste as would ensure a proper selection.

In the arrangement of a National Gallery we ought not to forget separate space for water-colour drawings and engravings. The first of these arts may be said to be of English growth, and in the latter we have produced examples which will bear comparison with those of any other country. AN ARTIST.

* All must feel it matter of regret that the "Strawberry Girl" and "Puck," in the late Mr. Rogers's collection, should have been allowed to pass into private hands: these works, for various qualities, would have been companions for the pictures of any other school.

THE METROPOLITAN BOARD OF WORKS.

PROJECTIONS BEFORE LINE OF BUILDINGS. WIDTH OF STREETS AND ALLEYS.

AT a Meeting of the Board on the 30th ult. the Superintending Architect (Mr. Marrable) brought up the following report on the opinion of counsel, on the application of Messrs. Broadwood and Son for permission to erect a workshop four feet in advance of the regular line of buildings.

"On the 19th of December last the board refused their consent to an application from Messrs. Edwards, architects, on behalf of Messrs. Broadwood, for leave to erect a portion of their manufactory situate in the Horseferry-road, Westminster, about four feet in advance of the line of the dwelling-houses on either side. They submitted a plan with the application, which was found upon examination to be correct, by which plan it appeared that all the houses or buildings on that side of Horseferry-road, extending from Earl-street to Regent-place, a length of 628 feet, although broken up into several blocks, maintained a regular and uniform line, with the exception of one small shop, about eight or nine feet high, and 17 feet wide, which projected up to the public thoroughfare, and a stack of deals approaching to within three feet of the foot-path. In reference to the Ordnance map it appears that no such deviation from the regular line as that now contemplated existed before the premises were lately destroyed by fire; and, looking at the importance of keeping the Horseferry-road (which is likely to become a great thoroughfare) as open and as free as possible, I recommended the board not to consent to the proposed projection, in which view of the case the district board of works concurred, and the application was accordingly refused. Since then a case has been submitted for the opinion of counsel as to whether the contemplated erection would be beyond the regular line of buildings in the street; and if the regular line means the two or three houses on either side of Messrs. Broadwood's premises? or if a straight line is to be drawn from the point of the houses at the corner of Earl-street to those at the corner of Regent-place? or is the regular line of buildings to be determined by a straight line drawn from one end of the street to the other along the side of the foot-path, parallel to the line on the other side of the way? or, in other words, are the boundary walls of the

garden and fore courts to be taken as constituting the regular line of buildings? Upon which case the following opinion has been given:—

"'Copy of Opinion.

"'We are of opinion that if the word "buildings" is to be confined to houses, shops, and erections of the like kind, there is not in the side of the road or street, if it can be called a street, in which Messrs. Broadwood's premises are situated, "any regular line of buildings in the street," with reference to which the line of the new building is to be taken; and if the word "buildings" is not to be so confined, but includes walls, then it is clear that the proposed new building does not project beyond the line. So that either way Messrs. Broadwood would be justified in what they have done, and are not answerable to the jurisdiction or proceedings of the Metropolitan Board.

"'We do not think it likely that, on consideration, the Board will persist in their objection; but, if they should, we would suggest that means may be adopted whereby a case may at once be raised, by consent, for the opinion of a court of law, so as to have the question set at rest without much expense or delay.

"'Temple, Jan. 3, 1857.'" "'FITZROY KELLY.
"'J. H. LLOYD.

The report thus proceeds:—"I will now make a few comments on the case as submitted to counsel. The plan which accompanied the case is not correct: it does not agree with that submitted to the Board with the application, and which was verified by the surveyor attached to my department, nor is it in accordance with the Ordnance survey, with which it has been carefully compared, nor with the detailed plans belonging to the engineer's department, nor with my own observations. * * * The opinion suggests that the word 'buildings' is to include walls, that is, the boundary walls of the fore-courts or gardens, which are to be considered as constituting the regular line of fronts. A reference to the 143rd section of the Local Management Act will show the fallacy of this argument, or why are the words 'notwithstanding there being gardens or vacant spaces between the line of the buildings and the highway' introduced; and if the boundary walls of the gardens or fore-courts are to be considered as buildings constituting the regular line of fronts, as the learned counsel in this case opine, then have the Metropolitan Board of Works the extraordinary power of granting permission to project buildings over and obstructing the highway. But, from various other analogous Acts, it is clear that the Legislature never intended boundary walls to mean 'buildings.' In the Building Act they are expressly exempted from the operation of the Act. But if a boundary wall is a 'building,' how is the required space between the buildings and the highway to be defined? Similar enactments exist in the Metropolis Roads Turnpike Trusts Act, in the Whitechapel Act, and other local Acts of a like nature. With regard to the present matter before the Board, I am of opinion, that if ever there was a case in which they were called upon to prevent any encroachment on the regular line, this is one; and if they consider a straight line extending for 628 feet from one street to another sufficient to constitute a regular line according to the spirit and meaning of the Act, they will not now rescind their former resolution, but let the matter rest where it is, as far as they are concerned."

After a discussion the Board passed on to the next business, but notice was given of a motion to rescind the refusal of the Board to allow the projection.

Major Lyon brought up the subjoined—

"BYE-LAW AS TO THE FORMATION OF NEW STREETS IN THE METROPOLIS.

"In pursuance of the powers vested in the Metropolitan Board of Works, by the Act of Parliament passed in the nineteenth year of the reign of her present Majesty, intituled, 'An Act for the better Local Management of the Metropolis,' it is hereby ordered by the said Board as follows, that is to say:—

1. Six weeks, at the least, before any new street shall be laid out, written notice shall be given to the Metropolitan Board of Works, at their office, No. 1, Greek-street, Soho, in the county of Middlesex, by the person or persons intending to lay out such new street, stating the proposed level and width thereof, and accompanied by a plan of the ground, showing the local situation thereof.

2. Forty feet, at the least, shall be the width of every new street (except as hereinafter provided), and the said width of 40 feet shall be construed to mean 40 feet of carriage and foot way, exclusive of any gardens, fore-courts, open areas, or other spaces in front of the houses or buildings erected or intended to be erected in any such street. Provided that every new street intended only for foot traffic, and along which vehicles (excepting hand trucks and scavengers' carts) are not intended to pass, and also every mews, shall be of the width of 20 feet at the least, and the said width of 20 feet shall be construed to mean 20 feet of road or foot way, exclusive of any gardens, fore-courts, open areas, or other spaces in front of the houses or buildings erected or intended to be erected in any such street or mews. Every new street or mews shall have at the least two entrances the full width of such street or mews, both of which shall be open from the ground upwards, unless the Metropolitan Board of Works otherwise consent in writing.

3. In any new street where any of the intended houses fronting such street are to be of a height, above the level of the footway, exceeding the width of 40 and 20 feet respectively, as hereinbefore prescribed, the width of every such street shall be not less than a measurement equal to such height.

4. The measurement of the width of every street shall be taken at a right angle to the course thereof, half on either side, from the centre or crown of the roadway to the external wall or front of the intended houses or buildings on each side thereof; but where fore-courts or other spaces are intended to be left in front of the houses or buildings, then the width of the street, as already defined, shall be measured from the centre line up to the fence, railing, or boundary dividing or intended to divide such fore-courts, gardens, or spaces from the public way.

5. Every new street must be laid out at such a gradient or inclination as will facilitate traffic along such street; but in no case must such gradient or inclination exceed 1 foot in 50, unless with the special sanction of the Metropolitan Board of Works.

6. The carriage-way of every new street must curve or fall from the centre or crown thereof at the rate of half an inch at the least for every foot of breadth.

7. The kerb to each footpath must not exceed 9 inches in height, and the slope of every footpath must be 1 inch to every foot of width, if the footpath be unpaved, or three-quarters of an inch to every foot in width, if the footpath be paved.

8. The materials of every carriage-way, when not paved, must, to the thickness of at least 12 inches from the surface thereof, consist of flints or granite, broken into cubes of an average size of 2 inches, or of such other materials as shall be approved by the Metropolitan Board of Works in writing, and the materials of every footpath, whilst unpaved, to the thickness of 6 inches at the least, must consist of gravel upon a substratum or layer of dry brick rubbish.

9. In case of any breach of the regulations contained in this bye-law, the offender shall be liable for each offence to a penalty of 40s.; and in case of a continuing offence, to a further penalty of 20s. for each day after notice thereof from the Metropolitan Board of Works.

10. In this bye-law the word 'street' shall be interpreted to apply to and include any highway (except the carriage-way of any turnpike-road), and any road, lane, footway, square, court, alley, passage, or mews, whether a thoroughfare or not, and a part of any such highway, road, lane, footway, square, court, alley, passage, or mews."

The Bye-Law is to be discussed on Monday, the 9th inst. by a committee of the whole Board. Although at present but a proposition, we have printed it in full, that such of our readers as are interested may have the opportunity, should they desire, to communicate their views to the Board. The requirement of two entrances in the case of every street or mews, no matter how wide it may be, the full width of such street, and open from the ground upwards, although unquestionably desirable, will be found a hardship.

WANT OF EMPLOYMENT FOR BUILDING OPERATIVES.

WE give insertion to another letter in reply to "T. L. D.":—

SIR,—For the last ten years, a society of carpenters and joiners have been subscribers to your paper, and during that time have put up with much unpalatable matter, but perhaps none more so than that which appeared in your impression of the 24th ult. from your correspondent, "T. L. D."

The first impulse of their indignation was to discontinue taking in the *Builder*;* but the better course adopted was to reply to your correspondent, and show that his "hard truths" appear falsehoods to us.

With regard to the first "great cause" of the scarcity of employment, namely, the high price of capital, we, as a class, do not know anything about it; but what we are sure of is this, that there are thousands of able and willing hands ready to build houses; and we are equally sure that there are as many thousands of operatives who are almost houseless, or pent up in such crowded, ill-conditioned houses, that really they are not worthy the name of home.

And yet this sad state of things is brought about by the "pernicious influences of trades unions." Is it so? Well, let us see! We are told that we must "conform to the times," and accept work at a lower rate of wages, without stopping to inquire into the injustice we should commit on our fellow-workmen who were in employ at full wages, or the consequences of giving to unscrupulous employers the power to estimate for work to be done at ten or fifteen per cent. less than the more conscientious ones would do.

Suppose we accept the lower rate of wages, and wait "till more prosperous times:" they arrive, and the more independent apply for full wages: what is the result? "Oh, no!" (experience tells us) "we couldn't think of such a thing: if we grant it to you, others will require it." Of course they would, and have an undoubted right to it, which we can prove. What is the consequence? Men combine, and demand it. What else could they do? Individually they are powerless; but the many refusing to work upon such and such conditions, is at once simple and effectual, and the employers are harassed and annoyed until they comply. Then comes the fierce outcry on the injustice and madness of the working classes, taking the insane advantage of a little prosperity to destroy all the hopes and calculations of the great contractor, and lamenting the sad necessity of the capitalist taking his capital to a land where the laws are more stringent, and the operatives more submissive.

Trades unions, as your correspondent would have us believe (and I now write more precisely in reference to our own branch of the building trade), do not in reality exist. "A society man" is the exception, and not the rule, in builders' employ; and those steps that have been made in the advance of wages' movement, or for shortening the duration of the hours of labour, have been the result of spontaneous organization, which has decayed with the success or failure of the object they sought. But if the demands are not founded in justice, it is impossible they can be maintained. And we assert that the advance of wages was a necessity arising out of the progressive increase in the price of provisions; and we totally deny that it makes "labour more costly," because the improvements in machinery have kept pace with the advance of wages; and with the assistance of machinery, employers can produce a larger amount of work for less money than they could when workmen's wages were lower. And is your correspondent to employ his superior education and position in inducing us to excel the policeman in respectability on the smallest possible amount of wages? But we reply, that the policeman's superior decency and behaviour is not the result of his superior intelligence or lower wages, but to the rigid discipline and organization invented by his employers. And who cares about the decency and behaviour of the bricklayer's labourer, so long as he can toil up the ladder with his hundred weight of bricks on his back? No, sir; it will be time enough for your correspondent to lecture us on the "pernicious influences of trades unions" when we see employers emulate each other in providing for the welfare and happiness of those in their employ, instead of amassing wealth, and rivalling each other in obtaining the largest amount of work at the least possible cost.

On behalf of the "Progressive" Society of Operative Carpenters and Joiners,

J. C. ARNAUD, President.

* Very sensible and fair, certainly. Those who happen to think with "T. L. D." may, on like ground, have the same impulse as the society in question, on reading what follows. Thus, it would seem, that seeking to hold the scales with an impartial hand, and allowing both sides to be heard, is the sure way to be abused by all. We yield to none in desire to advance the interests and better the condition of the working classes of this country.

THE NEW TOWN-HALL, BURSLEM.

THE inauguration of the new town-hall at Burslem took place on Wednesday in last week, when a banquet was held in it. The hall is an isolated building, in the centre of the Market-place. Its fronts partake of the same general character, but differ slightly in detail: generally they are divided into two stages, the lower one being battering and deeply "rusticated," with arched windows, having covered jambs and moulded sills. The upper story consists of pilasters of the Corinthian order, grouped in couples, having between them semi-circular headed windows. The angles of these fronts have a detached column in lieu of the ordinary square angle pilasters. The western front has for its main feature an entrance porch, consisting of an arched and groined carriage way. Above this is a colonnaded portico, with its pillars grouped in fours: from this a clock turret rises, the lower stage of which is supported by eight caryatides, and the upper one formed by an octagon bell turret, ornamented with festoons of fruit and flowers. The whole is surmounted by a vane of wrought iron. The interior contains in the basement waiting-rooms for prisoners of both sexes, a heating apparatus room, and a kitchen. The ground floor has a corridor running from end to end, communicating on the one side with the offices of the surveyor and the town clerk. The board-room is 20 feet wide by 29 feet long, furnished in oak and green velvet, the chairs being in the form of those used by the senate of ancient Rome, that of the chief bailiff being supported by figures of Industry and Integrity, and surmounted by the arms of the town painted on china. The news-room, 20 feet wide, and 27 feet long, is furnished in oak and green morocco. On the opposite side of the corridor is the police court, 50 feet long and 20 wide, fitted with dock and bench of oak, and intended further to be decorated with figures of the Angels of Justice and Mercy. The remainder of this side is occupied by the apartments of the hall-keeper and a private staircase to the orchestra. The entrance-hall has two flights of stone steps leading to the main hall. The main hall is entered from this staircase by three doors, and is 50 feet wide and 80 feet long. The walls are panelled by doubled Corinthian pilasters, as on the exterior, and the whole picked out in various colours. The room is lighted in the evening by means of sunlights. At the east end is an orchestra, capable of containing about 100 performers, and an organ. The contractor for the building was Mr. Robert Young, of Lincoln; for the stone carving and modelling, for plaster and iron work, Mr. Hugh Kirk, of London; for the cast-

iron work, Messrs. Hardy and Padmore, of Worcester; for the furniture, Mr. Chapman, of Newcastle; for the heating apparatus and gas-fittings, Mr. Whitehead, of Preston. The china door furniture was made by Messrs. Mayer, Brothers, and Elliot, of Dale Hall; and the iron-work for the vane by Messrs. Skidmore, of Coventry. The modelling of the figure of the vane and the carving of the caryatides, were by Mr. Wood, of Lichfield. The whole has been carried out under the surveillance of Mr. Ralph Hales, the surveyor to the Local Board, from the designs and under the superintendence of Mr. George T. Robinson, of Leamington, architect.

ON SUBMARINE ELECTRIC TELEGRAPHS.

INSTITUTION OF CIVIL ENGINEERS.

ON January 20th and 27th, Mr. I. K. Brunel in the chair, the discussion on Mr. Window's paper, "On Submarine Telegraphs," occupied both evenings. A description was given of the two kinds of submarine cables employed,—the simple cable, composed of one wire in each non-conducting envelope, a certain number of them being laid down side by side, so that in case of a casualty occurring to one wire the others might be made use of; and the compound cable, wherein a given number of wires were covered by one envelope of iron wire. The recent casualties occurring to these cables were quoted in support of the advantages offered by the simple cable; as, in consequence, the Calais cable, which was of the compound kind, being torn asunder by the anchor of a vessel during the late gales, there had ensued considerable inconvenience, until the transit of the messages could be arranged by another route; whereas the simple cables, although partially injured, had never ceased to be capable of conveying messages.

The chief point suggested for discussion was the difficulty of working, at a satisfactory rate, through such a length of cable as that now being constructed to connect Europe with America. There was reason to believe that the effects of the phenomena of induction and retardation were exaggerated. The electrical conditions of an underground wire coincided with those of a submarine wire. The first English underground line of any importance coated with gutta percha was that laid by the Magnetic Company in 1851, between Liverpool and Manchester.

Some time since Mr. Charles Bright, in conjunction with Mr. Whitehouse, had made some experiments through 2,000 miles of wire, connected so as to form a continuous circuit, terminating at both ends in the earth. Intermediate instruments were placed at each loop, to test the thorough action of the electrical waves through the entire length, and signals were clearly defined at a rate of ten to twelve words per minute. Two large induction coils, three feet in length, excited by a powerful "Grove" battery of fifty pint cells, but connected for quantity in sets of ten, were used to generate the currents, which were very powerful. From all that had been shown in the paper, it was contended that no difficulty was likely to arise in working from Ireland to Newfoundland that could not be effectually dealt with.

It was observed that, although Mr. Crampton's name had been prominently mentioned, in connection with the first successful and permanent application of submarine cables, he did not in any way claim the merit of the invention, and was most anxious to bring forward the legitimate claims to priority of all those who had made the investigations upon which the system was based, and to give their share of merit to all who had co-operated with him, in the actual operation of laying down the first working cable. The invention, or discovery, resulted in fact from the combined investigations and experiments of several gentlemen, as had been observed in the paper; and, in corroboration of this, a tracing was exhibited of a drawing made for Professor Wheatstone in 1840, showing the submarine cable in its details of construction, insulated by tarred yarn and covered with iron wire; and the mode of laying down and picking up was also shown. There could not be any doubt of the authenticity of the drawing, and it was known that Lutwiche, who made it, went to Australia in 1841, and had not since been in this country. It was always said of him that he had aided Professor Wheatstone in working out the mechanical details of the proposed system of submarine telegraphs, stated by the professor, before a Parliamentary committee, to be practicable.

The names of Mr. Wollaston, an early labourer in the field,—of Messrs. Wilkins and Weatherly, who attended to the machinery for constructing the cable,—of Mr. Newall, who made the cable,—of Mr. Statham, who effected the gutta percha insulation,—of Messrs. Davis and Campbell, solicitors, to whose energy and confidence the ultimate success was so greatly due, — and of Mr. Brett, whose indomitable perseverance had kept the subject constantly before the public, were successively mentioned, and their respective shares in the merit of the submarine telegraph duly apportioned.

From investigations it appeared, that without any direct trial in long subterranean or submarine wires, but by reasoning on the known facts and measurements regarding electric conduction through copper, and electric induction across solid insulators, there were strong grounds for confidence, in expecting that a message of twenty words would not require more than seven minutes for its delivery, and that 200 such messages could be sent during the day of twenty-four hours, through such a cable as was proposed to be laid across the Atlantic. There was even reason to think that rate might be ultimately exceeded, by the perfecting of the system introduced by Mr. Whitehouse.

In some experiments through a length of 1,600 miles of wire, made with varying battery powers, gradually increased, by successive additions, from thirty-one cells to sixteen times thirty-one cells, there was no sensible variation in the velocity of the currents, which was found on an average to be about 1,000 miles per second.

It was observed, that the statement of Professor Faraday, that different and distinct waves of electricity might co-exist in any long submarine conductor, at the same instant of time, was fully borne out by the recent researches of Mr. Whitehouse. In a length of wire of 1,020 miles, three signals of a signal stroke bell had been distinctly heard after the hand had ceased to transmit; and in a length of 498 miles, two such signals in arrear had been heard.

It was remarked that the subject under discussion involved two principal questions, which should be discussed separately, namely, the mechanical one of insulating, shielding, and submerging the metallic conductor, and the electrical question of transmitting messages through the same when laid. With regard to the first, it was shown that Mr. Werner Siemens, of Berlin, discovered the non-conducting property of gutta percha in 1846; and that in the spring of 1847, he proposed to the Prussian Government the establishment of underground line wires, coated with that material. In the autumn of that year an experimental line of 20 miles in length, from Gros Beren to Berlin, was completed, and was found to work so successfully, that in the years 1848-9, about 3,000 miles were laid on this system. In March, 1848, several miles of copper wire, coated with gutta percha by means of the cylinder machine, were submerged in the harbour of Kiel, for the purpose of establishing an electric communication between the shore and several points in the deep channel, and this was asserted to be the first attempt ever made to establish submarine communications. It was suggested that the passage of an electric wave through a cable might be accelerated to nearly four times its natural velocity, by simply returning the current through a second insulated wire within the cable, instead of through the earth. The present successful submarine cables were a combination of a perfectly insulated wire, contained within exterior strong iron wires, running in a longitudinally spiral direction. The invention of this kind of cable was claimed for Mr. Edward Highton, on the authority of a judgment stated to have been given in the Cour Impériale de Paris, and it was asserted that the Solicitor-General for England concurred in this opinion. Although gutta percha, when buried in the earth, and acted upon under peculiar circumstances, was subject to decay, yet, as far as past experience had gone, sea water seemed to be a preservative of that gum. It was suggested that the conducting wire of a subterranean or submarine telegraph might be protected from oxidation or decay at any point of leakage, by means of an electric current.

DANGEROUS STRUCTURES UNDER THE METROPOLITAN BUILDING ACT.

IN Mr. Haywood's last annual Report to the Commissioners of City Sewers, he says, under the head of "Dangerous Structures";—

"In the year 1855 the Amended Metropolitan Building Act placed the control of ruinous buildings with the commission. Upon the 1st of January, 1856, the Act became operative. The commission immediately organised the system of carrying the provisions of the Act into effect; and, throughout the year, their transactions, consequent upon this additional power, have largely increased their business.

During the year 1856 the number of structures reported upon by surveyors appointed by the commission was 286, the number of cases heard before magistrates was 24, the number of buildings shored up during the year was 150, the number of cases certified by the surveyors as being completed was 170. Almost the first cases dealt with by the commission were the most prominent of those structures which had been shored up previously to 1856, and had been long standing nuisances. I may mention Nos. 98 and 99, Cheapside. The engineer then proceeds at some length to treat upon the subject of hoards and scaffolds, and then says,—'Projections over public ways have given the commission their usual amount of trouble during the past year, and although convictions of offenders have sometimes ensued, still projections over public ways remain a difficult subject of management, and are, in my opinion, likely to become more so. I can only see one remedy for it—which I am convinced must be applied at a future day—the entire prevention of all projections over the public way within certain limits as to height.'"

NEW HOSPITAL AND OTHER BUILDINGS AT ADELAIDE.

THE new hospital at Adelaide (South Australia), or rather, a portion of the final edifice, has now been erected, and, by last accounts, was shortly to supersede the old hospital. The new building is in the Italian style of architecture, and is said to unite excellent internal arrangements with a handsome exterior. Its extreme length from east to west is 196 feet, and its depth from north to south 108 feet. The elevation is 38 feet, and the area covered by it is 1,277 square yards, or about a quarter of an acre. It contains four large wards, two upstairs and two below, 56 feet long by 30 feet wide, each capable of containing at least twenty beds. There are, in addition, twenty-three rooms on the ground-floor, including two commodious accident wards, and an operating theatre, surgeon's rooms, committee-room, drug-store, bath-room, dispensary, and apartments for wardsmen and nurses. On the upper floor there are sixteen rooms besides the wards, with every necessary accommodation for washing, &c. and conveniences for isolating patients. The upper floor is reached by three staircases, built of Sydney cedar, with balustrades of Singapore cedar, which lead to two corridors, 36 feet and 44 feet long, respectively. On the ground-floor there are two corridors, the main one being 124 feet, and the minor 60 feet long, and there is also a verandah extending for 60 feet. The building is furnished with a system of ventilating pipes. Water is supplied to all the rooms. The centre of the building, as complete, is surmounted by a square tower 64 feet in height, enclosing a tank capable of containing 1,500 gallons of water. Immediately behind the centre are the kitchens, but they are not yet complete. The fault of the building appears to be, that the portion which will be the centre of the complete hospital is too low, and much out of keeping with the rest of the structure; a defect which is said to appear the more striking from the altitude of the tower above the rest of the edifice. With this qualification, the new hospital is regarded as a creditable production. The architect is Mr. Edward Hamilton, and the builder, Mr. Farr. The total cost of the building is, we understand, 10,000*l.*

The more recent buildings of this city, fortunately, give promise of an abandonment of the gaol style of building; and, even in two or three story houses, says a local authority, flights of stairs are now seldom omitted. "There is the Supreme Court, an imposing-looking structure; the Bank of Australia, both imposing and elegant; the chapel in Pirie-street, with an agreeable appearance, not often seen in so young a country. These, indeed, show that there is some taste in the colony, and the most recent dwelling-houses make a nearer approach to convenience and comfort than any that have preceded them. The Legislative Council-chamber is a pretty building, because it is a copy of a picturesque town-hall in one of the Midland Counties of England. The Police Barracks and Armoury, whatever may be their internal arrangements, are bare and unsightly in the extreme. The Lunatic Asylum is intended to be an elegant Gothic building—but its harsh and attenuated proportions, and narrow windows, give it a gaol-like and close appearance."

RECENT PATENTS.*

1577. JOSEPH ADSHEAD, Manchester.—*A new Application of a known Material to be used as a Substitute for Plastering, Painting, Papering, Whitewashing, and Colouring.* Dated 5th July, 1856.—This invention consists in the use or employment of the painted or distempered and varnished fabrics known as oil baize or oil cloth, as a substitute for plastering, painting, paperhanging, whitewashing, and colouring houses, ships, &c.

1537. F. G. SANDERS, Poole, Dorset.—*Manufacture of Ornamental Floor and other Tiles, Bricks, Slabs, and other similar Articles.* Dated 1st July, 1856.—This invention consists in making the above articles of pulverised clay in various colours or designs, to render them applicable to decorative and ornamental purposes, by combining pulverised clay of different colours in such manner that the manufactured articles will have a variegated or ornamental

* From the *Engineer*.

appearance given to them by the particular arrangement of the materials.

1574. LOUIS CORNIDES, Trafalgar-square, London.—*Cementing and Uniting together Plain or Ornamental Surfaces of Glass, or in Uniting Surfaces of Glass to Surfaces of Metal or other Material.* Dated 4th July, 1856.—The transparent cementing compositions or solutions are operated upon in an air-tight and air-exhausted apparatus, into which the materials to be united are placed after the contact surfaces have been coated. Cement No. 1 is composed of four parts of gum damar, or other transparent gums or resins, mixed with one part of spirits of turpentine or other solvents. Cement No. 2 is composed of one part gelatine, one part sugar, and eight parts water. No. 3 cement is composed of four parts gelatine, one part sugar, four parts water, and 1-16th part of creosote, thoroughly mixed and incorporated together.

1605. HENRY PAGE, Whitechapel-road, London.—*Ornamenting or Decorating Glass.* Dated 8th July, 1856.—The designs with which the surface of glass is to be ornamented or decorated are cut on blocks with a raised surface, after the manner of blocks used in calico-printing, paper-staining, &c. Or the designs are cut out of thin metal (or other material), as in stencilling. If cut on blocks, the blocks are dipped and receive the colour from a sieve or roller as in paper-staining. If cut out in metal or other plates, the colour is applied with a brush, and may be applied at once to the surface of the glass after it is prepared.

1621. D. W. HAYDEN, Glasgow.—*Fastenings for Window-shutters.*—Dated 9th July, 1856, but not proceeded with.—Instead of loose and complex fastenings the present invention provides for the obtainment of complete security by means of details, which are always retained in their place, and can never be mislaid or lost, whilst the acts of fastening or unfastening are simple and almost automatic.

1576. JENS FOSS, Manchester.—*Cutting and Sawing.* Dated 5th July, 1856, but not proceeded with.—The cutter is formed of two thin steel blades, the edges which are made plain or indented according to the nature of the substances to be operated upon. These two blades are brought in contact with one another, or nearly so, they being passed between two pairs of adjustable rollers, placed the one pair above, and at a convenient distance from, a table or support for the material that is to be cut, and the other pair under the said table. The blades are stretched over two pulleys, the one pulley above the top set of rollers, and the other under the bottom set. . . . As the two blades are cutting in opposite directions, or against one another, it will be seen that the material, being pulled against the edges of the blades, will be acted upon in a manner similar to that produced by a pair of shears or scissors.

RAILWAYS ON COMMON ROADS.

I HAVE read with much pleasure the able letter of your correspondent, "Joseph Lockwood," and entitled "Railways on Common Roads;" and, as it is a subject which I have had under my consideration for some years, I venture to trouble you with a few remarks.

I am glad to find that some attention has been devoted to this matter, and that our continental neighbours are really awake to the fact that large lines require feeders, and that they are using legitimate means to increase their traffic, and develop the resources of the districts through which they run. I am convinced that an arrangement of this sort is one much required in this country, and that even if the executives of the main lines do not examine and take up the subject, probably, when public attention has been called to its advantages in your valuable paper, something may yet be done, either with or without their assistance.

If the outlying towns become awake to the fact that they, by a moderate outlay, may embrace the advantages of railway communication even in a modified shape, you may rest assured it will not be long before some inquiry be made into the advantages and capabilities of "tramways," and easy travelling, over "cramped busses" (sometimes not too clean) and uncertain accommodation, or, in eight cases out of ten, on your arrival at the station per train, you find no alternative but to leave your luggage and make use of nature's "locomotive," or to be politely fleeced under the guise of special hiring.

Although the towns in the United Kingdom having railway stations are numerous; and that, considering the network of railways now spread over England and Scotland, it would appear to a casual inquirer that ample accommodation was provided, and that there was little room for any auxiliary stations, a careful examination will at once convince that a wide field is open to carry into eminently practical operation a system of intercommunication, as suggested in your recent impression. The benefit of station accommodation has been directly extended to a great number of towns, still the places having such advantages only amount in the aggregate to about 2,000; and if the population returns be examined, it will be found that, although the principal towns have been especially cared for in the establishment of the railway system, there are yet nearly 5,000 towns or villages without a railway station, and in the majority of instances without even the "shaky omnibus" so graphically described by Mr. Lockwood.

There are many towns to and from which even a tramroad would be an unprofitable speculation, but there are also a great number of towns which would only to be too glad to avail themselves of tramroads, and to contribute a considerable portion of the required cost of laying down to bring themselves within regular and certain communication with the main line of the nearest railway; and I think it only requires a comprehensive plan to be submitted for consideration, to meet with approval, and ultimate adoption. The old saying of "Heaven helps those who help themselves" would apply in this particular instance; and those towns which are now in a comparatively isolated state, by adopting a proper system of horse railways, might emerge from their isolation, and, by re-connection with the main stream of communication, rub off the rust accumulated by partial non-association, and become valuable feeders, and part and parcel of a system in a secondary, if not able to attain a primary position. C. W. K.

Books Received.

The Cabinet Lawyer: a Popular Digest of the Laws of England; with the Criminal Law of England, a Dictionary of Law Terms, &c. Seventeenth edition, extended and corrected throughout. London: Longman and Co. 1857.

"THE CABINET LAWYER" is so standard and well known a work for popular use, and so useful a book to keep people out of difficulties, that it is only requisite here to record another proof of popular estimation, namely, the issue of the seventeenth edition. For masters and workmen, landlords and tenants, inventors and patentees, sanitary reformers, business people in general, and a host of others, this is one of the most valuable books of reference possible. Besides all that is indicated slightly in the title as here given, it contains assessed tax tables, stamp and house duties, cost fees and charges in the superior and county courts, &c.; and the present edition, besides being enlarged and revised, contains the statutes and legal decisions to Michaelmas term, 19th and 20th Victoria. Special reference should be made, or attention drawn, to a useful section on the working classes, friendly, industrial, provident, and loan societies, &c.

VARIORUM.

The *Quarterly* contains a long and interesting article on "The History and Antiquities of Northamptonshire, with Suggestions for County Histories." Speaking of the picturesque old manor-houses of the county, the writer gives the following notice of Sir Thomas Tresham:—

"Sir Thomas Tresham, the builder of the triangular lodge at Rushton,* appears to have been the architectural Durandus of his day, and in his 'New Building' at Lieveden has left another no less fanciful, but more utilitarian work of constructive symbolism. This curious building is in the form of a Greek cross, with projecting bows at each limb; round the whole house run bands containing the sacred monogram, the instruments of the Passion, and invocations to our Lord and the Blessed Virgin. There can be little doubt of its destination to domestic, not, as is usually asserted, monastic purposes; and it seems to afford an admirable, though expensive model, for a middle-sized house. It owes its present forlorn condition to the same party of Cromwell's soldiery that ransacked Nicholas Ferrar's house at Little Gidding. The market-house at Rothwell, never finished, and inadequately restored in 1827, is another monument of Tresham's architectural taste, and, if we may trust the inscription running round it—*nihil præter bonum commune quæsivit, nihil præter decus perenne amicorum*—of his public spirit and private friendship; the arms of ninety families of the county form the cornice. A fine alabaster monument, unique as to costume, now removed from the destroyed church of St. Peter's to All Saints', Rushton, represents Sir Thomas in the robes of Prior of the Order of St. John of Jerusalem. There can be little doubt in assigning to him the main part of Rushton Hall, the fine screen of which is a famed example of the Elizabethan style. From the Treshams the estate was bought by Sir William Cockayne, ancestor of the Lords Cullen. It is to the marriage-feast of Bryan, the second Viscount, that the familiar legend belongs. He had been betrothed, at the age of sixteen, to Elizabeth Trentham, a great heiress, but had, while travelling abroad, formed an attachment to an Italian lady of rank, whom he afterwards deserted for his first betrothed. While the wedding-party were feasting in the great hall at Rushton, a strange carriage, drawn by six horses, drew up, and forth stepped a dark lady, who, entering the hall and seizing a goblet, 'to punish his falsehood and pride,' drank perdition to the bridegroom, and having uttered a curse upon his bride, in stronger language than we care to chronicle, to the effect that she should live in wretchedness and die in want, disappeared to be traced no further. The curse was in a great measure fulfilled. She became a beauty of Charles II.'s court, was painted with less than his usual allowance of drapery by Sir Peter Lely, twice gave an asylum to Monmouth in the room at Rushton still called the 'Duke's Room,' and, as might be inferred, living unhappily with her husband, died, notwithstanding her enormous fortune, in comparative penury, at Kettering, at a great age, as late as 1713."

* A view and details of this curious structure will be found in vol. iii. of the *Builder*, pp. 538, 539, and 559.

——"The Monthly Review" (Mitchell), the new volume of which is to include political articles occasionally, contains a discriminating paper on the Soulages Collection, urging, properly, that "in the present we must do present things; we must work for present uses with modern appliances and advanced scientific light." The writer, however, is too good-natured to the present, when he suggests that a walk through the collection shows "the great advance in most particulars of similar arts and productions of our own days." In the majority of the departments the very reverse ought to be the impression given.——"The Boards of Health and Burial Boards Officers' Pocket Almanac and Guide for 1857," has appeared (Knight, Fleet-street, publisher by authority to the Board). Besides other matter to be found in almanacs generally, it contains lists of the members of the Metropolitan Board of Works and General Board of Health, an article on Sanitary legislation and progress during 1856, a list of burial boards and of places under the Public Health Act, with names of officers, population of districts, &c. From the article on Sanitary legislation and progress, it appears that during the last three years, sanctions for necessary works of water supply and drainage to the extent of 1,600,000*l.* have been granted, being more than half a million sterling beyond the amount granted during the preceding 5¼ years, namely 1,056,000*l.*——"The Literary and Scientific Register and Almanac for 1857," by J. W. G. Gutch, M.R.C.S.L., late Foreign Service Queen's Messenger, and dedicated to H.R.H. the Prince Consort (Bogue, Fleet-street), appears to be one of the most generally useful of the host of almanacs now published. It contains an extensive mass of condensed matter relative to scientific, art, and literary subjects, in very small compass, and bound up as a handy little pocket-book.——"The Post Magazine Almanac and Insurance Directory for 1857," is a well-established and a useful sixpenny almanac, this being the sixteenth yearly issue: it is published by Mr. Pateman, at the "Post Magazine" office, Wine-office Court, Fleet-street, and contains, besides the more permanent matter, lists of projected Assurance Associations, and notices of Assurance Office changes, up to the time of publication.——In the current *Edinburgh Review*, besides an able and kindly notice of Mr. Fergusson's "Handbook of Architecture," there is an article on Human Longevity, interesting to sanitary reformers. The writer will not assent to the doctrine that a century is the natural term of human longevity; but admits "that individual habits may be made to contribute much to the healthy prolongation of life; and we can affirm," he adds, "with assurance, that these habits are such as best accord with the happiness, dignity, and higher destinies of our species."

STAINED GLASS WINDOWS IN SOUTH WALES.—With reference to the stained glass windows executed for the church of Lanfair-Nantgwyn, in South Wales, and mentioned in our last, we are asked to say that the cartoons were designed and prepared by Mr. Alfred Bell, as they were also for some of the windows at Aberporth.

Miscellanea.

DAMAGE TO BUILDINGS.—At the County Court, Bolton, last week, Mr. Thomas Lane sought to recover 20*l.* as damages done to a house in Bridgeman-place, Bolton, by the defendants, Moses Kirk and Thomas Brown, erecting a warehouse adjoining his premises. In sinking for foundations they had gone about 5 feet below the scullery foundation of the plaintiff's house, consequently it was necessary to "underpin" it; but recently it had become damaged by the foundations giving way from an engine gearing being connected to the wall. The judge, after going through the evidence, directed a verdict to be given for nominal damages. A verdict was accordingly given for one shilling, with common costs. A notice of appeal was given against the decision.

ACCOMMODATION AT THE MANSION HOUSE, LONDON. — Recent investigations at the Mansion House have more clearly proved the inconveniences resulting from want of accommodation in the place, and its remarkable inaptitude for the transaction of the public business. There is but one room appropriated for numerous affidavits and declarations made by merchants, bankers, and others, and, when witnesses are required to be out of court, they are crowded into one room, by no means large enough. The small room allotted to the chief clerk has been, on each occasion, occupied by the gaolers and convicts. It is believed to be the only police-court in London in which such meagre accommodation is given, and Captain Williams, the Government Inspector of Prisons, is said to have severely condemned it.

ARCHITECTS' BILLS.—In the sittings at Nisi Prius, at Westminster, before Mr. Baron Bramwell and Common Juries, on Thursday in last week, Mr. Lee, an architect and surveyor, sued the solicitor to the officers of the parish of Epsom, for 49*l.* for work done on his order. The plea in defence was, never indebted. The plaintiff's case was, that in 1852 a new valuation of Epsom was made by Mr. Penfold, and a poor-rate made on that valuation. That rate, however, was appealed against by the gas company, the owner of the Grand Stand, and another. Mr. Penfold was instructed by the defendant to find an architect and surveyor to confirm his own valuations, and he accordingly communicated with the plaintiff, who valued the properties, and it was for the time and labour expended in so doing that the present action was brought. It was also said, on the part of the plaintiff, that his charge was a fair and reasonable one. The defendant's case was that he was not personally liable, but that the parish officers were, who were his employers. The parish officers had not disputed their liability to the plaintiff's claim, but had refused to pay it, as it was considered by them to be excessive. The jury found a verdict for the plaintiff for the amount claimed; and the Judge gave the defendant leave to move the court upon the question of law.

BOILER EXPLOSIONS.—From the second annual report of the Association for preventing Boiler Explosions and Economising Steam, lately published in the *Mechanics' Magazine*, it appears that there are now 462 members in the Association with 1,301 boilers in use, 193 members with 458 boilers having been added since last report. During the past year, 2,246 visits have been made, and 1,456 boilers examined by the chief and sub-inspectors. These visits disclosed that 143 boilers, or nearly ten per cent. of the whole, were in a dangerous condition. Thirty-one boilers have exploded during the last year, causing the loss of fifty-eight lives, and serious injuries to upwards of seventy persons, but no explosion occurred on works belonging to members of this Association. Surcharged steam is said to be a frequent cause of such explosions.

"BIG BEN."—In the section of the Westminster Clock-tower, given in your number of last week, Big Ben is shown suspended in the most sensible way possible, that is, by a single bolt passed through his central top. Permit me to suggest, that a suitable number of small spherical rollers be introduced between the collar of the bolt and the inside of the crown: the rollers may be kept equidistant, by a simple carriage made to receive their axis. Key a ring of teeth, or wheel, into the flanch of the neck, on the top of the bell: attach a screw or worm gearing into the ring of teeth, and furnished with a capstan head into the under side of the beam, from which the bell is suspended: then a man standing on a suitable platform will, with a lever, easily work the capstan, and turn the bell. The rollers will greatly reduce the friction, and, consequently, the labour of turning, and also the objectionable twist on the central bolt. The object of turning a bell is now too well known to need explanation.* W. L. BAKER, C. E.

* The screw may be inclined in order to suit a wheel, cast with straight teeth. A precedent for this will be seen in Messrs. Maudslay and Field's patent disconnecting apparatus for paddle-wheels, which has been successfully used for many years in Government steam-ships.

ACTION FOR REPAIRS, UNCOMPLETED FROM TRADE UNION INTERFERENCE. — At the Grimsby County Court, in the course of last month, a ship-builder, Mr. Keetley, sued the owner of a Whitby vessel, Mr. Isaac Mills, for payment of 40*l.* odds, for repairs in dock at Grimsby. The owner had instructed one of Mr. Keetley's foremen to send carpenters on board, who accordingly proceeded to repair the vessel, but left her on understanding that the owner had a dispute with the Whitby carpenters, the repairs being uncompleted, and the vessel in a dangerous state was sent up the river to have the work finished, Mr. Keetley refusing to employ his apprentices, who threatened rather to go to jail than obey his orders. The county court judge, in summing up, said, that there was no contract proved, and that "Mr. Keetley could not force either his men or his apprentices to work. And he had done all he reasonably could under the circumstances. The vessel was better by the amount of repairs done to her, and would cost that amount less when she was taken to complete;" and as none of the charges in the amount claimed were disputed, he should leave it to the jury to consider their verdict. After retiring for a short period, the jury returned a verdict for the plaintiff for the amount claimed.

THE DOCKS NAPOLEON COMPANY *v.* FOX, HENDERSON, AND CO.—The Tribunal of Commerce at Paris have given judgment in two actions, in which Messrs. Fox, Henderson, and Co. were respectively the plaintiffs and the defendants, and their opponents were the Docks Napoleon Company. The judgment is a lengthened document, but the conclusion is to the effect that Messrs. Fox, Henderson, and Co. and the directors of the dock company, Messrs. Cusin, Legendre, and Duchêne de Vere, with whom they had arranged for the construction of the docks for 24,000,000f. on a secret understanding that the directors should have 1,800,000f. commission, were equally blameable, and their secret transaction was therefore declared to be "null and void, and of no effect, as stained with fraud (*entaché de fraude*):" the tribunal "condemns the defendants [Messrs. Fox, Henderson, and Co.] to restore to Torchet, Picard, and Labot, in the quality of directors, the 32,000 dock shares they have unduly received; and in the event of their not doing so within a fortnight from the signification of the present judgment, and without any other formality, condemns them personally, by all the means provided by law, and even under pain of imprisonment, to pay the sum of 4,000,000f. instead of the said restitution; declares the counter-action of Fox, Henderson, and Co. unfounded, dismisses it, and condemns them to all the costs."

NEW CARPET-WEAVING PROCESS. — Mr. T. Wheeler, of Leicester, has patented a new weaving process, and has it in extensive operation at the Abbey Mills. The principal features in which the method differs from that once universally employed, has been described to us as follows:—Instead of wires introduced in the ordinary manner, a bar with a double row of hooks, and a knife working between them, is suspended over the fabric, the hooks taking up each separate warp-thread as brought up by the Jacquard, and holding it perpendicularly on the face of the work, until the loops are cut by the action of the knife. A pile of any depth required is thus produced, as well as a speed, a uniformity, and an evenness of surface not attainable by any methods ordinarily used. The effect is said to be excellent.

IMPROVEMENT IN CANDLE LAMPS AND CANDLES. —I send you some suggested improvements in the apparatus connected with artificial light, which I believe practicable and important, as ensuring us a better means of illumination than any at present in use, with the exception of gas. First, as to the candle: this is to be made with a hollow aperture or canal running through it, its entire length; and to effect this it will be necessary for the moulds to have running down their centre a circular piece or pipe of metal, attached to the mould by a cross-piece of metal at the end where the tallow or other composition is poured in. This will thus form a hollow or pipe throughout. The candlestick is to be so constructed that, besides the socket (which need not be deep) there shall run from the centre of it a hollow metal pipe (of some kind that will stand heat well). The hollow of the candle will then correspond with the metal pipe of the candlestick, which will feed the flame with a stream of atmospheric air,—acting on the same principle as the Argand lamp does, and also ensuring stability of the position of the candle, thus doing away with the necessity of a deep socket,—a slightly-raised ledge being sufficient. The wick must be circular, and spread round the air-tube. The "spring" principle, as applied to the candle-lamps already in use, must be used, because the pipe or air tube would be *necessarily* a fixture. A commoner candle might be made on the same principle by dipping straws, covered with a wick, into the tallow or other composition employed in the manufacture of candles; the straws being previously steeped in a solution of borax to ensure the construction of the wick (as in the case of composite and other candles which require no snuffing): the straw would supply a stream of air, equally with the metal pipe or tube, fixed to the candlestick. The suggested improvements sent occurred to me some three or four years ago; and very soon after I saw an account of the same principle being in use in Russia, in the serial called "Household Words." The writer there expressed his surprise that it had not made its way to this country; and, after being published in that popular miscellany, it seems strange that no one has attempted to introduce it in this country.—AN UNEMPLOYED CLERK.

THE TURNER WATER-COLOURS, about 100, are now exhibited at Marlborough House. They consist chiefly of the drawings from the Liber Studiorum; of the well-known series of drawings called "English Rivers;" of those which illustrate the course of the Seine; and of the drawings for the vignettes to Rogers's "Italy." These, with the landscapes of Edinburgh, painted in the year 1800, the "Capture of Fort Bard," in 1805; "Ivy-bridge," also an early drawing; and "Folkestone," will be found to exhaust the number specified.

THE SWANSEA COLLEGE COMPETITION.—In 1848 was awarded to me the second premium of 15 guineas, in competition for designs for the Normal College, Swansea. I have just received the second instalment from the secretary, after corresponding with him during the whole of the intervening period, accompanied with law proceedings, and finally issuing a writ against him. You may recollect, the first design chosen was not executed; I was never applied to; my drawings were retained, with the understanding that in all probability they would be carried out for the purposes of an agricultural college in the district, of which I have since heard nothing. Perhaps the above may prove useful to some of your readers, and may procure some explanation.

R. H. POTTER.

TENDERS

For covered market, Tunstall. Mr G. T. Robinson, architect. Tenders for builder's work:—

	Outer Walls, faced with Common Brick.	Add for Dressed Brick Facing.	Deduct for Old Materials on Site.	Total.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Robinson.....	5101 14 5	75 0 0	350 0 0	4826 14 3
Hardwick ...	4792 0 0	46 1 3	150 0 0	4688 1 3
Wilkinson ...	4471 0 5½	176 17 7	400 0 0	4274 18 0½
Batty	4563 19 10	55 5 6	350 0 0	4269 5 4
Chapman* ...	4100 0 0	70 0 0	470 0 0	3700 0 0

* Accepted.

For ironfounders' work:—

Cochrane, Dudley	£2,800 0 0
Bewley, Uttoxeter	2,250 0 0
Hardwick, Birmingham.....	2,074 18 0
Handyside, Derby	1,961 0 0
Horsley and Co. Tipton.....	1,950 0 0
Fetherston, Manchester.....	1,932 0 0
Perry, Bilston	1,876 0 0
Whitehead, Preston	1,830 0 0
Haywood, Derby	1,750 0 0
Chapman, Newcastle (accepted)	1,750 0 0

For the erection of show-rooms and alterations at Messrs. Porteous and Gregson's, Walworth. Messrs. Willshire and Parris, architects. Quantities furnished by Mr. S. Field:—

Edward Cock.....	£1,074 0 0
Messrs. Lucas	1,030 0 0
Messrs. Brass and Son	1,012 0 0
John Willson.....	995 0 0
E. B. Gammon	970 0 0
William Higgs	950 0 0

TO CORRESPONDENTS.

Westminster Palace Clock.—We are requested to state that this clock is at Mr. Dent's manufactory, Somerset Wharf, Strand, where it was manufactured, and not at Millbank, as stated in last week's article on this subject.

"*Dampness in Stone.*"—As in the case of "Smoky Chimneys," several gentlemen have written, offering their services to cure the evil complained of by "C. O." and manufacturers have sent circulars descriptive of their wares. These, however, are not what is sought.

"J. M." (we are forced to decline). — "G. C. R." (ditto).—"C. S."—"F."—"G. F. G." (the term "belfry" applies to the whole of a tower, or other structure, carrying bells. It is applied specially to the space in the tower wherein the bells are hung).—"A Dunce" (the *Pons Asinorum* is the fifth Proposition of the 1st Book of Euclid). — "P. and Sons." — "R. J. W." — "E. T. L." (declined with thanks).—"W. A."—"An Eight Years' Subscriber" (everything depends on the agreement and your ability to prove it. Put the details before a solicitor). — "A Bricklayer."—"G. T. R." — "F. R." (we cannot speak on assertion simply).—"G. G." Southampton (when we have seen the description we will determine).—"An Architect" (declined with thanks. Moreover, it appears that the second premium *was* awarded). — "F. T. D."—"T. G."—"J. J."—"J. N."—"C. B. A."—"W. W. jun."—"C. H."—"A Constant Reader" (we cannot recommend). — "J. G."—"J. U."—"W. G. E." — "Mr. N." — "So-called Mediæval" (is in type).

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.